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ABSTRACT

This scholarly journal, an official publication of the Reading Recovery Council of North America, was established to provide an interdisciplinary forum on issues related to the acquisition of language, literacy development, and instructional theory and practice. Articles in Volume 5, Number 1 are: "Affinities and Contradictions: The Dynamics of Social or Acquisition Learning" (Don Holdaway); "Is Early Literacy Intervention Effective for English Language Learners? Evidence from Reading Recovery" (Jane Ashdown and Ognjen Simic); and "Re-Conceptualizing a Change Model: Implementation of the Early Literacy Research Project" (Janet Scull and Neville J. Johnson). Articles in Volume 5, Number 2 are: "Children's Achievement and Personal and Social Development in a First-Year Reading Recovery Program with Teachers in Training" (Lorene C. Quay; Donald C. Steele; Clifford I. Johnson; William Hortman); "Inventing Literate Identities: The Influence of Texts and Contexts" (Prisca Martens and Susan Adamson); and "Teacher Leadership: A Key Factor in Reading Recovery's Success" (Jean F. Bussell). (NKA)

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2

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Volume 5, Number 1 — 2000

3

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Table of Contents

Affinities and Contradictions: The Dynamics of Social or Acquisition Learning

Don Holdaway, New South Wales, Australia 7

Is Early Literacy Intervention Effective for English Language Learners? Evidence from Reading Recovery

Jane Ashdown, New York University and Ognjen Simic, New York University 27

Re-conceptualizing a Change Model: Implementation of the Early Literacy Research Project

Janet Scull, Department of Education and Training, Victoria and Neville J. Johnson, The Univerisity of Melbourne 43

Affinities and Contradictions: The Dynamics of Social or Acquisition Learning

Don Holdaway, New South Wales, Australia

The following is the text from a Keynote Address delivered at the Northeast Early Literacy Conference and Reading Recovery Institute, November 8, 1999, Boston, MA.

Our most complex accomplishments as human beings are the cultural and conventional life strategies of which language, in all its many forms, is the central and most pervasive example. One of the delights of parenthood is to stand back and watch our own idiosyncrasies of manner and speech flower in the behaviour of our children. In taking credit for these apparent miracles, from time to time, we know that we have contributed little in conscious effort or deliberation to those sophisticated accomplishments — they just pop up unheralded and thrive in the ecology of family culture, healthily nurtured and well formed. How do these apparent miracles come about? We need a theory, and a perennial one is to hand in the concept of "nature."

That wonderful portmanteau term "natural" has come to be used most commonly to characterise these wonders of normal development. However, this usage hides paradoxes of its own — indeed, the word "natural" throws up implicit contradictions and confusions which appear impossible to resolve. The types of development we wish to identify here — sophisticated skills including language, art, culture, and thought — these are activities which drive human experience quite *beyond* anything that could be called "natural" in normal usage. (Thinking of the DNA helix, or sub-atomic physics, of course, the term "nature" could indeed stand for the level of complexity we observe in developmental learning.) We are concerned with behaviour that is at the same time highly conventional (i.e., *unnatural* in the senses of non-instinctive, contingent, sophisticated rather than primitive, and culturally involved rather than physically simple) and behaviour on the other hand that is basic to human *selfhood* (i.e., *natural* in the sense of being normal, taken for granted, occurring without teaching, becoming functional in infancy or early childhood, and, in the context of development, the *very opposite of artificial or contrived*). Oh, the headache!

This paradoxically "natural" learning (which we can now no longer refer to with any consistency as "natural") encompasses for instance, the primitively simple (waving goodbye), the emotionally turbulent (the tantrum), and the cognitively mind-bending (English grammar). Developmental tasks are among the most complicated and involved undertakings we ever face, often taking many years to master (like giving a lecture) and never being perfectly mastered — we continue to add complexity to all our cultural accomplishments throughout life. They are what make us human. And perhaps in this pregnant sense we may retain the claim to naturalness.

Learning to be human beings with a sense of self-in-community entails *relationship* — with others, with context, with environment, with the world, and with self. Developmental learning prepares us to handle these relationships, and most crucially to *communicate* and to *think*. Considering this, we should not be perplexed that such learning is the most complex we undertake, even though it may appear easy. It also tends to be the most exciting, and the most fulfilling of our undertakings because it takes us into rich relationships and brings satisfying rewards.

Unlike the conditioned reflex — although it might subsume a few of those too — learning social skills defies inclusion within the parameters of the isolated, responding animal, unable to communicate linguistically, to categorise, or to create a culture. Language stands at the heart of these interactional tasks, learned in tiny increments over many years, yet often contributing a significant element to the learning of a non-verbal skill such as dancing or carving a joint of beef. We are unlikely to determine how to support the learning of language without first understanding something about the critical conditions of social learning, and stubbornly refusing to accept oversimplified instructional methodologies based solely on the principles of classical learning theory.

Our first approach should be to analyse the most effective example of social learning, namely the acquisition of spoken language in early childhood. We would be wise to take very seriously any of the conditions which we find consistently displayed there; to be very hesitant about discarding any one of them in planning instruction; and to research assiduously their effectiveness when applied to the teaching of the more challenging developmental tasks such as reading and writing.

Setting up appropriate social conditions can be seen as the most demanding, yet the most powerfully rewarding, aspect of effective language instruction. By contrast, the tendency in schooling has been to consider warm social conditions as a desirable *refinement* applied only to the extent that discipline and an inflexible methodology allows. If a humane educational approach conflicts with the needs of a rigidly applied instructional technology, the tendency has been to abandon the humanity without too much regret. A more considered approach to healthy social interactions in the classroom is justified by a close and honest analysis of acquisition, and the full range of social learning.

Social skills, although including the most complex preoccupations of human communication, are nevertheless acquired within the most normal interactive settings. For this reason they tend to be thought of as simple in structure and unproblematic — indeed "natural," and not a likely source of methodological insights. For whatever reason, the special conditions prevailing in social learning have seldom been carefully analysed and defined by educational theorists, nor clearly distinguished from the more accessible and researchable forms of learning about which a mass of data has been accumulated.

The conditions applying to the interactions of those engaged in social learning contrast strongly with the conditions applying to the isolated individual exploring the sensory world which have been so compellingly analysed in the research of Piaget and others — except, of course, in so far as that learning entails the need to *extend language knowledge*, as in determining new terminology, categorisation, or other linguistic reference (Bruner, 1986). The extent to which the isolated explorer of sensory experience and its meanings depends upon the planning language of inner speech or of organising self-talk also raises issues about the social prerequisites of such learning. There is an extent to which prior language learning is necessary for an intelligent exploration of human sensory experience and the development of logical, reversible, and mathematical learning. In this sense, as has been shown in the

work of Vygotsky, the complex conditions of human social learning have fundamental precedence in human development (Bruner, 1986). The primacy of social and linguistic learning has been implied by the work of such thinkers as Vygotsky, and we are faced ultimately with the challenge of defining in what ways and to what extent primary social conditions modify and qualify *all* learning to some degree (Wertsch, 1985).

Complex human thinking and learning, of course, are displayed in increasingly abstract and academic undertakings as schooling proceeds, and here the actual conditions under which learning takes place are modified in convoluted and depersonalised ways. It would be my contention, however, that these modifications towards abstraction subtly build on the conditions of social learning and never completely dispense with them, even in the highly individualistic and competitive structures often imposed at higher levels. It seems to me to be a matter of some concern to explore these subtle relationships more deeply and to describe with greater precision and refinement the modification of learning conditions occasioned by academic endeavours. This becomes increasingly pressing as the need for our society to achieve more general academic competence in facing an information world that challenges schooling. The level of wastage of human potential as measured by the promise of almost universal early mastery of oral language tends to indicate that this task of achieving educational success that reflects real potential in our communities is something we continue to do very poorly.

A great deal of confusion has resulted from the failure to clarify and research these matters, especially in identifying optimum conditions for learning in the field of literacy. Tradition has tended to regard the conditions applying to the uptake of spoken language as being *radically* different from the conditions applying to the learning of reading and writing — even to the extent of excluding the "acquisition" of spoken language from learning itself in any classic sense. To my mind this is a dangerous distinction, quite unwarranted by the evidence. There may be *additional* conditions applying to the learning of reading and writing, but these do not in any way exclude or replace the fundamental conditions applying to the learning of *all* social skills — they simply add an upper level of complexity to the social structure of linguistic learning.

The concept of "acquisition," introduced by Chomsky and the modern linguists during the fifties to account for the inexplicable success of early language mastery, has been wholeheartedly embraced by all the disciplines concerned with language development. Despite the often uncritical acceptance of assumptions claiming the innate origins of linguistic competence, the concept has proved to be remarkably generative in many fields. It has at least attracted a vast corpus of descriptive data concerning the development of most aspects of early speech.

Created in direct distinction from concepts of learning, the concept of acquisition has nevertheless proved a powerful focus of speculation predisposing research to ignore any possible comparisons with the mastery of reading and writing. In very paradoxical ways it has constituted a unique challenge to those concerned with the teaching of literacy — a challenge that has never been faced with directness and clarity. Considering the comparative inefficiencies of school instruction in reading and writing — and the almost embarrassing professional warfare of attempts to establish scientifically attested teaching regimes over the generations — it is not surprising that linguists were pleased to dissociate the mysteries of spoken language mastery from anything to do with teaching or learning as understood in schooling. On the one hand, the power of the "acquisition" concept was denied to schooling or instruc-

tion, while on the other, it opened the most fertile territory for research in language development.

The concept is extremely strange in definition. In 1987, James Gee of Boston University formulated the matter in lay terms thus:

> Acquisition is a process of acquiring something *subconsciously* by *exposure to models* and a *process of trial and error*, without a process of formal teaching. It happens in natural settings which are *meaningful and functional* in the sense that the acquirer knows that he needs to acquire the thing he is exposed to in order to function and *the acquirer in fact wants to function*. This is how most people *came to control* their first language.[1] [italics added] (p. 2)

In contrast:

> Learning is a process that involves *conscious* knowledge *gained through teaching*, though not necessarily by someone officially designated a teacher. This teaching involves *explanation and analysis, that is, breaking down the thing to be learned into its analytic parts*. It inherently involves attaining, along with the matter being taught, some degree of meta-knowledge about the matter.[2] [italics added] (p. 2)

One might, in passing, question whether the distinctions italicised represent real contrasts between "learning" and whatever this strange "non-learning picking up" might be. However, it is clear that among the academic purposes of the "acquisition concept" was a determination to acknowledge the astonishing success of first language mastery without debt to instruction, together with an intent to hijack this mysterious accomplishment as a phenomenon uniquely different from anything we had previously categorised as learning. Perhaps this was something that warranted an hypothesis of pure innateness. (Recall Chomsky's invisible ghost in the machine, the "Language Acquisition Device.")

At least there was something distinctly "natural" about this process in contrast to the necessary artificiality of school-based instruction in reading and writing. The first implication of this contrast was to suggest that the skills of early oral language were somehow naturally absorbed out of the environment, while those of written language had to be formally taught – one was "natural," the other "artificial." This distinction, in light of the comparative difficulty in the mastery of one as opposed to the other, seemed obvious to common sense. This seemed to explain and excuse the unnaturalness of the instructional environment of school, especially in the need to teach reading and writing in strictly formalised ways.

Certainly, there was now a convenient explanation for the differences between the communal warmth of the settings in which oral language was mastered as compared to the socially stressful environments of traditional schooling. It became more defensible now to accept the corrective and often punitive practices of traditional instruction while dismissing as irrelevant to teaching the positiveness and spirit of approbation that characterised early speech. These were dangerous and perversive assumptions. They allowed the judgement to be made that because so many children failed to master reading and writing in contrast to success in the mastery of spoken language, this indicated how different and difficult written language skills were, and how necessary it was to analyse the parts and drill them systematically. Considering the range of new psychological disorders and debilitating neuroses that result from the great crop of accepted failures, it would seem appropriate to question whether the very radical *differences in conditions* between learning spoken language at home and learning, or failing to learn, reading and writing in school might account for the very difficulty attributed to literacy learning.

The concept of "acquisition," highly ambiguous from the very beginning, has remained so. The underlying process of picking-up-without-learning that is implied by the concept has always been vague in the extreme. When the processes of "acquisition" are examined by any reasonable person, the evidence is overwhelming for the presence of active *learning*, and of the classic *conditions* of learning. If "acquisition" is *not* learning, we may ask, what under heaven might it be?

When we begin to analyse the conditions surrounding early language uptake it becomes clear that the identical characteristics of learning are displayed in the mastery of many forms of developmental tasks wherever conventional, social, or cultural conditions apply. Watch any young child learn to whistle a tune or dance the twist. The same facilitating social interactions are apparent. What we are facing here, I believe, are the common and general conditions of social learning: if we are bound to the term, let's call it "acquisition *learning*." As we shall see later, not only is there a host of skills displaying identical social structures undertaken in this manner, but also this mode of learning constitutes the very basis for human language, thought, and culture. All those conventional and sophisticated behaviours that distinguish human experience and allow for the transmission of cultures depend on powerful social learning structures.

For those of us who teach as a profession, the claim of innate exclusiveness for spoken language learning presents a special challenge, for if such a claim can be sustained, our tasks in teaching language become fatally confused. Do we change the basic structure of our relationships as we move from oral to written language preoccupations in the classroom, from "acquisition" to "instruction?" In the practical situation the suggestion is absurd — it is pragmatically impossible, since spoken and written language tasks meld together inextricably. The suggestion that children will pick up spoken language from the environment without conscious analysis, while it is necessary to break written language down to its parts in analytic ways, confuses the teaching of *both*.[3]

The first clear signs that this phenomenon of early language mastery occurring without instruction was *not* unique to spoken language arose in the early seventies when the successful pre-school literacy of a significant proportion of young children began to be studied around the world (Holdaway, 1979). It is not surprising that, in studying the situations in which these cases of early literacy were happening, it became obvious that exactly the same facilitating conditions as surround the acquisition of speech were present in those early literacy environments *par excellence* — and their effects were quite as startling. As pre-school studies of literacy proliferated, it became obvious that all children in our society have developed concepts about literacy to one degree or another before the beginnings of formal education and that they do so in contingencies strikingly similar to those prevailing in spoken language learning. The study of these "emergent literacy" behaviours has radically altered our understanding of readiness and literacy programs in early schooling. We may now assert that the principles displayed in the early mastery of spoken language are both relevant and critical to mastering literacy and have serious implications for the nature of efficient instruction in the school context.

Furthermore, as we have noted earlier, in the mastery of other socially motivated developmental tasks of a non-linguistic nature, such as tying a shoelace or riding a bicycle, or applying cosmetics at a much later stage, we again find the classic conditions of so-called "acquisition" at work. In the fascinating area of developmental play (currently unfashionable as a model among educators despite its central relevance to schooling), we cannot but acknowledge striking similarities to the conditions that

support oral language development. Indeed, upon examination, the mastery of most developmental tasks is clearly *integrated with* the development of speech — talk surrounds and supports the learning of almost every task, and self-talk, including inner-speech, continues to organise and guide the operation of most non-verbal tasks.[4] (When the seven-year-old manipulates his toy front-end loader in the sandpit we can hear the instructions he gives himself, and his intent expression and protruded tongue signify the passage of purposeful inner-speech.)

If we take the view of Vygotsky on these matters, the development of thought itself in the young child shares the same conditions as support the acquisition of speech, and are, indeed, an integral part of that process (Wertsch, 1985). Each of the situations we have touched upon — early speech, emergent literacy, developmental play, and what might be called "emergent thought," share the same structure of learning conditions, including all the features of "acquisition." In apparent contradiction to the distinction made by Gee above, all involve the use of both "metacognitive awareness" and what might be called "natural instruction" to some degree. Even the extent to which conscious or unconscious processes involve sophisticated analysis is a matter of degree in all developmental tasks, including the "acquisition" of spoken language — which clearly involves such precise distinctions as those of phoneme boundaries.

Obviously, there is something real and fascinating in the acquisition/learning distinction, but it is neither exclusive nor skill defining. The distinction points to something very basic about human abilities and the way in which they are transmitted — especially in contrasting with the non-conventional or non-cultural learning of rats and pigeons.[5] However, a fundamental reformulation is required to avoid the paradoxes which arise in regarding acquisition as something other than true learning. The use of the concept historically has proved both confused and deeply misleading.

I am suggesting, along with Vygotsky and Bruner, I believe, that the critical common ground for these particular forms of learning that sometimes involve learning-without-formal-instruction resides in the social and conventional nature and purposes of the accomplishments involved. This type of learning involves complex and socially sophisticated conditions which are displayed only in the development of human skill and it is simply not sufficient to provide the conditions of classical learning theory alone to ensure efficient socially mediated learning, especially for language oral *or* written.

No set of educational problems has been experimented with so confusingly nor researched more energetically than the teaching of reading and writing over the generations and with increasing urgency and expense than our own. Despite this enormous investment, however, it has been all too easy to neglect the social imperatives that underlie all successful linguistic learning. Our favoured teaching methods over the years have usually displayed what seems obvious to common sense and manifestly "rational" but have often been scornful of the need for an underlying structure of sound and humane social imperatives. Such, for instance, is our confident application of analytical and abstract structures of teaching and socially isolating regimes of corrective and competitive instruction even in the early years of literacy teaching. Why should we be baffled and appalled by the social despair of so many of our failing charges when the sources of their dysfunction or despair lie so clearly in the conditions of instruction which have blithely scorned the social necessities of healthy linguistic learning. But is it possible to define with any clarity what are the important facilitating social conditions that support linguistic and academic success? I believe it is.

The conditions that control the operation of social learning are displayed wherever conventional or socially mediated skills are involved and clearly include *both* spoken and written language. They determine the structure and procedures of optimum response and their neglect not only dumb down response but may even actuate compensatory mechanisms or dysfunctional development. I wish to emphasise here that the learning of reading and writing, together with a range of other socially mediated skills, may display the same remarkably facilitating conditions as are displayed in the acquisition of oral language as outlined below. Furthermore, I believe that in overlooking the actual processes of *real learning* in the "acquisition" of oral language we have obscured a proper awareness of those conditions *that most powerfully support the acquisition of literacy.*

The Dynamic Conditions of Social Learning

Learning which occurs spontaneously and without ostensible instruction in natural cultural settings, such as speaking, singing, dancing or riding a pony, can be seen to display four distinct processes or strategies: demonstration, participation, role-playing or practice, and performance. Each requires different dispositional stances by the learner and, once the process begins for a particular skill, tends to display a driving, compulsive, progressive quality from stance to stance. These four aspects of learning activity may blend or change rapidly or slowly — over seconds, minutes, or days — and may therefore be difficult at times to distinguish clearly or to program in an attempt to set up the conditions deliberately. Even in the pedagogic situation, deliberate application of the conditions in each area demands a certain spontaneity or, at least, authenticity and purposive intent.

Demonstration (Immersion in Environments of Skill Use)

The learner *observes and admires* the important members of his or her family or community using the skill naturally in carrying out genuine life purposes. In the literature of language instruction this has been technically called "immersion." The motivation to become a skill user is engendered by such immersed "demonstrations" especially when the learner is strongly *bonded* to the significant, competent other who is using the skill. The bond produces a curiosity of a very special kind — intense, persistent, fascinated, and sensitive to detail. The learner turns this deep observational attention to how the skill functions and what purposes it fulfils by viewing it in this holistic way. This intense form of curiosity and observation begins a process of "engagement" which characterises the learner's attention throughout the entire sequence of interactions with "teacher" and with task (Smith, 1983).

An empathy is set up in which the learner's system begins to feel and reflect aspects of the skill in use. The observation of genuine demonstrations seldom remains passive. It drives the learner into action, closely reflective of the details in the activity. Where conditions are congenial, questions will be asked and comments made but the action of choice will usually be to join in or to participate (see section on participation below). As an instance of this activity: if the bonded adult claps hands, this will be observed with delight and immediately a participant attempt will be made — not at first very successfully — to clap. If the mother chatters to the baby, the baby is likely to babble back. These attempts at participant action display a crucial characteristic of *approximation*. When a favourite story is read repeatedly, the baby is induced to participate at crucial, repetitive, or stressed parts of the rhyme or story.

Participation (Hand-in-Hand Learning)

The learner attempts to "get into the act," often compulsively and clumsily, and *participates* with the bonded user being emulated. This behaviour always displays *approximation*, accepted by the skilled user, and inevitably progressive over time. The learner makes a determined approach to the skill both physically and psychologically, reducing the distance from the user in both of these ways — perhaps snuggling up and smiling attentively. Where a tool or instrument is involved, the learner will handle the artifact associated with the skill or a play substitute for it.

At this point the competent user being emulated usually takes the learner "by the hand," so to speak, and engages in a special mixture of showing-and-explaining-while-doing. The teacher figure may initiate an appropriate entry to that part of the skill that the learner is *ready* to undertake by a comment, a question, or a facial expression. This "instructional" activity has often been referred to as providing a "*scaffold*" for the learner, often carried out quite intuitively but sometimes with deliberate instructional intent (Clay, 1999, 1998; Wells, 1986). This is the powerful teaching opportunity of the acquisition model. Despite the direct inducement to "have a go," this activity essentially retains the form or spirit of real participation — it is a trial activity while help is at hand.

This cooperating activity initiates the process of *learning-by-doing* which continues relentlessly and even accelerates, especially in the next phase of independent practice, and then powerfully on throughout the final phase of performing. We are reminded ever so warmly of the work of John Dewey, who was the first to develop an educational philosophy around socialisation, and who first clearly enunciated the dictum of "learning by doing." How long do we have to wait?

Role-Playing or Practice (Self-Improving Reflexive Activity)

When left alone to his or her own devices, the learner engages in aspects of the skill at the current level of competence, *role-playing* as a skill user and *practicing*, often with remarkable application. This practice usually takes place beyond the direct influence of the bonded people who are being emulated: the learner imagines what it feels like to be a skill user and explores the experience in a *degree of privacy*. Although the important people may be present or within call to answer questions or give support, they are usually otherwise preoccupied. The behaviour is *not being performed for an audience* — the learner performs exclusively for self, listening or monitoring in self-appraisal. In this setting it is normal for *self-correction* and *self-regulation* to occur spontaneously from the earliest stages of learning.

This latter activity is self-reflexive; that is, directed back on itself in persistent monitoring, turned inwards on self-evaluation rather than turned outwards to seek an external evaluating or correcting audience. An additional, complex level of operation is added on top, or in addition to, the basic output or response (which may be clumsy and contain approximations or errors which may now be corrected). This self-monitoring or checking activity develops a cybernetic level of spontaneous feedback which supports, maintains, and where necessary corrects, the primary responses (Bateson, 1972). In this way, errors become learning points in a tangibly improving process built on approximation — errors, through self-correction, become positive stepping stones rather than points of failure or embarrassment as they tend to become when corrected by an outside agent. Only in this way can the learner develop what Marie Clay calls a "*self-improving system*" (Clay, 1991).

This reflexive element of social learning can be seen to be radically different in form from the much recommended, and externally administered "reinforcement contingencies" of classical learning theory. Here we have one of the great advances or enhancements involved in social as distinct from classical learning. This self-regulative dimension that is added to simple response provides for a remarkable boost in efficiency and explains the enormous productivity of what I have called "acquisition learning." Here we have an explanation for the apparent miracle of learning to speak — that mystery which tempted linguists such as Chomsky to believe that spoken language is intuited through some innate mental agency without learning or instruction. Even today this crucial aspect of social learning is largely overlooked both in research and in pedagogy, and especially in the teaching of literacy, which takes its linguistic and pedagogic pedigree from spoken language as is plain to see. Major emphasis in standard methodologies is given to external reward contingencies and to the questionable inducements of competition, rather than to this powerful source of intrinsic reinforcement that operates whether or not an external agent, such as a teacher, is present.

In dealing with this most complex aspect of social learning, another insight about the structure of learning needs to be suggested. In his germinal speculations about the development of mind, Gregory Bateson, in his fascinating study titled *Steps to the Ecology of Mind* (1972), presents a complex hypothesis about what he calls "deutero-learning" or what might more simply be called "learning-to-learn." He suggests there is a hierarchical structure in learning by which the repeated experience of simple modes of learning generates knowledge about *how to learn*. This amounts to the creation of higher order *strategies* for learning which may provide for significant efficiencies in later learning.

There is much to support this hypothesis that learning-to-learn is necessary to the efficiency of higher order operations such as those entailed in conventional tasks, for instance those involved in linguistic, cognitive, and logical processes. These are highly suggestive areas for research into complex learning and related pedagogies. I simply make the suggestion here that the significant increase in skill that results from the reflexive and self-corrective processes we have noted in the mastery of developmental tasks represents a sophistication that might best be categorised as "learning-to-learn." When they role-play and see themselves as being users of developmental tasks, learners take advantage of a strategy that lifts their efficiency to new levels. To become dependent on being corrected by someone else is to remain at an inefficient level of learning and to be cheated of the opportunity for rapid independent self-improvement.

Performance (Sharing Accomplished Increments of Skill)

Finally, as the learner feels comfortable with the stage of skill reached at a particular point — a perception that stems from self-evaluation — he or she seeks out an audience, normally the bonded skill user who has shared and introduced the skill. Driven by the expectation of approval, or the fulfilment of real literate purposes, the new learner *performs* in ways that display small improvements in skill. This process does not wait on complete skill or perfection — it follows the progressive and approximating practice of significant parts of the skill.

The intent of these often "bitsy" performances is to be acknowledged as a member of the community of skill users and this is almost universally successful regardless of the actual level of competence — any display of skill, no matter how clumsy or elementary in the early stages, is sufficient

to gain a ticket of membership of the club. In this way the learner enjoys a sense of belonging, an assurance of acceptance even when skill is at a primitive level.

This display of a new increment of skill is seldom driven by an intent to compete. The aim is to become, and to remain, a full member in the natural community of users of that skill, equally with others. The tokens of performance are offered as both a claim to approval and an appeal for group acknowledgement, not an appeal to be judged as *better than* others.

Combination of the Processes

These four processes, so distinct from each other in cognitive structure and intent, yet crucial to the singular process of mastering a social skill, are often blended together with great fluency and rapidity, obscuring the very different nature of the operations. However, it is this operational complexity that characterises the wonder of human cultural transmission, especially in the central, dominating tasks of language and the self-talk (inner speech) of thinking. Properly understood and applied in authentic ways they offer a path to powerful instruction.

Classic theories of learning, in the search for simple scientific regularities and based largely on animal studies, overlook the most obvious characteristics of social learning. Even the subtle and detailed insights springing from Piaget's lifetime of observation failed to analyse the specific conditions prevailing in social and particularly in linguistic learning, perhaps because of the socially isolating individual interview procedures upon which so many of his insights rested.

Vygotsky comes much closer to identifying the highly sophisticated nature of social learning from its beginnings in infancy, leading as it does to that phenomenon of inner speech that operates as the organiser of human perception, categorisation, problem-solving, and logical thinking (Bruner, 1986). Even the more recent research stemming from the work of Vygotsky leaves much of detail and sophistication still to be explored and ratified. My own concern has been in the main for the implication of these insights upon the teaching of literacy in particular, and more generally for implications of pedagogy at all levels, even in exclusively academic concerns. (Although it is not germane to my present purposes, the implications of post-modern points of view — particularly the work of Foucaux and the post-structuralists — suggest some fascinating critical implications.)

Interactional or Dispositional Stance in Social Learning

In the analysis of social learning above, I have attempted to highlight a number of important *interactional* conditions often described in anecdotal ways in the literature but not commonly identified with any clarity in discussions of complex learning. These interactional conditions or phases demand that distinctive cognitive attitudes be taken up by both learner and teacher as social emphases change during the total learning process — for the learner: moving from observation, to participation, to privately committed practice, to performance or display — for the teacher: moving from authentic use or demonstration, to helpful participation or scaffolding suggestion, to absence or availability only on request, to affirmation and appreciation as special audience. The proper disposition of each phase acts as a gateway to the next and mediates motivation. An adequate completion of each phase is necessary to the successful and progressive acquisition of skill, and the relative efficiency of the learning is dependent on the extent to which each phase has been properly experienced.

Certain conditions additional to those normally specified for efficient learning seem to me to be strongly facilitative of if not absolutely necessary to mastering the complexities of social learning. In each of the four processes I have outlined as sequenced in social learning there are characteristic psychological processes essential to efficient, progressive skill mastery. Each party to the learning, "teacher" and "pupil," takes up a particular cognitive and emotional attitude (i.e., dispositional stance) to the other party at each phase of the process. At the risk of some repetition and for the purposes of clarity and emphasis, I would like to characterise these highly significant relational, cognitive, and emotional attitudes or dispositional states.

The initiating processes of *demonstration and emulation* go further than simple modelling for they suggest a powerful, invitational relationship that pulls the learner in, rather than *forces* attention or presence. The setting is greatly facilitated by there being a *bonded relationship* between learner and teacher, one which heightens curiosity, observation and perception in strongly amplifying ways — every act of a bonded or mentoring figure is observed as if through a magnifying glass. Learners will attend much more perceptively to *authentic displays of skill* by "teacher" figures than they would do to artificial, didactic, half-hearted, or put-on-for-the-pupil behaviour. Powerful and dominating only at this brief, initiating stage of the process the teacher's task is to capture the learner in an intense *engagement* that will persist right through the complex changes of interaction that characterise the full learning protocol.

In the instructionally rich sharing situations of participation or hand-in-hand learning, lie the most fruitful situations for powerful teaching. Here it is the intuitive skill of the "teacher" in initiating, guiding, suggesting, questioning, supporting, backing-off, acknowledging — and a host of other facilitating interventions or withdrawings — that mediate the efficiency of the situation. These complex interactions, which have variously been called *scaffolding, prompting, hinting,* and *cueing*, form the foundation skills of effective instruction. It is in this interactional relationship that Vygotsky's insights about operating in the *zone of proximal development* are at their most functional. In the give-and-take of participant interaction, intentions, confusions, ways of doing things, and so on, are negotiated with a free flow of opinion, query, explanation, and clarification taking place largely at the behest of the learner (Clay, 1999). It is seldom that even a non-verbal skill will proceed into participant co-operation without a constant flow of language. This allows for a smooth flow of social feeling and for fruitful negotiation of new, puzzling, or tricky passages of "instruction." We could label this complex interchange *co-operative negotiation*. In this relationship can be seen the central secret of that remarkable motivation and "stickability" shown by very young children in mastering such highly complex human skills as listening and speaking.

In the apparently *non-social* activity of *role-playing* and *practice as genuine skill users*, learners take the opportunity of being left to their own devices in a degree of *privacy* to have a go at their own level of development, monitoring themselves, and pushing their endeavours a notch or two further along the scale of competence. The striving and persistence usually displayed is marvellous to observe. (Think of the toddler waking and babbling in the crib, or left there alone in the room with a favourite book after the bedtime story.)

Here, because of the lack of an audience or an immediately satisfying social setting, learners are thrown on their own resources. The process now becomes crucially *reflexive*, being turned back upon

itself in feedback processes of *self-evaluation, self-improvement*, and *self-correction* — learners listen in to or observe their own behaviour in a complex cybernetic regulation that turns mistakes into plusses. It is my conviction that this cognitively sophisticated operation, layered on top of association or conditioning, constitutes the critical factor in effective mastery of complex skills. It mediates reinforcement in powerful ways by providing reliable positive rewards for every *appropriate approximation* or small improvement in skill through a self-administered schedule requiring no outside evaluating agency. It occurs at those times when the parent or teacher is not available or is not attending.

The gradual acquisition of complex skills is characterised by *accurately rewarded approximations* that are available on flawless contingencies. When these vital cognitive strategies fail to develop appropriately in grappling with a complex skill, the learner becomes *dependent* and attempts to force "teacher figures" to take up co-dependent roles. In my estimation, much meticulously corrected and supervised instruction displays all the characteristics of co-dependent manipulation, denying learners the opportunity of independent success. In this way, very conscientious teachers who overlook the negative effects of unrelenting supervision may become enablers of pupil failure.

Approximation rules the contingencies of complex social learning such as spoken and written language, which take many years to mature and which continue a lifetime of development. The learner constructs a complex superstructure of self-awareness, approximating fearlessly even in the earliest bumbling stages before there is anything like real skill to suggest approbation. And the learner operates confidently in this way largely without embarrassment because most of the self-approved approximations have been made in private. This double-functioning, cybernetic process opens the possibility for continuous self-reinforcement and without the need for dependence on external agencies for correction and praise.

In self-chosen *performance* or the display of tiny improvements of skill, the learner seeks and achieves acceptance as a skill user even before there is any real skill. By making elementary responses the learner *claims membership* in the community of skill users. In natural social learning, such as the mastery of speech, the learner is never put down or ridiculed because of early ineptitude. These interactions establish and continually mediate a sense of *belonging* — the imprimatur of acceptance in a "family" of non-equals. In this "look-at-me" activity, whatever progressive installments of skill are displayed demand the *validation* of expert opinion — that response so deeply valued by the learner, especially if it comes from the bonded adult most closely emulated.

Freedom from ridicule or exclusion of any kind constitutes an essential condition for social learning. Indeed, even to be *noticed* as a learner has positive effects, and to be simply ignored proves almost as debilitating as to be punished. Uncompromising competition that normally feeds information of exclusion, disapproval, and blame onto a considerable percentage of participants can be everywhere observed as counter-productive to efficient and emotionally uncomplicated social learning. Just as damaging in my estimation is the *failure to take note*, either positively or negatively, which normally falls to the lot of a majority of learners in a competing social structure.

In highlighting these relational and interactional processes as necessary to efficient social learning, we face a range of conditions that seem to complicate accepted pedagogies. Some of these very demanding conditions appear even to contradict common instructional advice and practice, or at least require attention to factors regarded as unnecessary or irrelevant in common strategies of teaching. A

remarkable fact about this demanding list of interactional imperatives is the extent to which they have been confirmed in the research underlying the practices of Reading Recovery.

Implications of the Social Model for the Teaching of Literacy

Demonstration

The need for bonding and emulation implies that effective teachers of literacy must regard themselves as real, even enthusiastic, readers and writers — those whose authentically literate behaviour deserves to be emulated. It also implies using the most genuine and satisfying materials at the centre of "instruction" rather than spurious, worthless, or bowdlerised material devised for suspect instructional needs. The most powerful literature and the most meaningful material in any genre ought to be the basis of instruction at every level. Furthermore, the community in which the learning is to be fostered should display all of the genuinely literate human activities evidenced in the real social world. This activity will often become participant quite rapidly and blend into natural processes interspersing the activity with conversation, question, and response.

Participation

This attempt to share in the ongoing skill of a competent user implies a need for children to participate in other people's acts of reading and writing. It also implies that they will receive sensitive, invitational instructional help from the "teacher" within this meaningful and supportive context. The primary objective of "Shared Reading" and "Shared or Modelled Writing" in the classroom is to set up this participant structure in group settings within which learners discover what the teacher actually *does* when she is reading or composing text (Fountas & Pinnell, 1996). One reason for the comparative difficulty of mastering reading and writing is that in adult practice they tend to be such covert, even private and secretive activities. A wise teacher will display and discuss even the processes that occur *silently in her head* as she reads, writes, revises, edits, and publishes as a result of genuine literate activity.

There will be many forms of corporate and co-operative activity in an effective literacy classroom[6] — social interactions that involve all the major satisfactions of what it is to be literate — and the avoidance of strongly competitive motivations. (Competition may be powerfully motivating in the later developments of some linguistic skills, such as public relations, but it has no place in supporting the mastery of spoken and written language — which we all need in order to take our respected place in community and to bind us in common purposes before we become divided by either adulation or contempt. Nor can competition, when systematically applied to social learning, produce anything like comparable results in learning. Indeed, the "take" we get from school instruction in literacy often displays the precise outcomes predicted by the effects of a competitive regime — in that case we should not complain about our cohort of the disabled, the dysfunctional, and the distressed.) In these sharing and participating forms of "instruction," there will be a subtle input of leading questions and suggestive comment by the teacher providing jumping off points from which to develop new concepts and insights. As conversations, readings, writings and editings are engaged in and discussed, a large measure of the interactions will involve the *negotiation* of meanings and strategies for clear expression (Clay, 1999; Midkiff-Borunda, 1989).

Role-playing as a Skill User — Meaningful and Dignified Practice

This factor is perhaps the most difficult to provide for in school settings since it appears to conflict with the teacher's perceived responsibility to supervise everything that pupils do in the classroom. Yet, I would insist — this need for private and self-motivated practice constitutes a vital part of efficient learning. Until a child is reading and writing actively outside the contexts of instruction, satisfactory progress cannot be expected. In natural settings, much practice of this self-monitored kind occurs *in the presence of but beyond the direct attention of the "teacher."* For literacy learning this means providing opportunities for much non-directed and non-dictated activity with books and writing materials, including provision for publishing (what are walls for?) and for the compulsive desire to share, which arises as a result of satisfactory self-evaluation. When motivation is at a high level because of a communal environment, self-sustaining practice will arise naturally and will move forward to find an audience. In lively language classrooms, of course, much of this activity which is independent of adult supervision occurs naturally among peers — who role-play communal responsibility of every kind with interactive enthusiasm.

Unless readers and writers operate in self-regulative and self-corrective ways from the earliest stages, the learning process becomes dysfunctional, producing a variety of dependency disorders, very intractable to remedial intervention later in schooling after the first opportunities for healthy learning have passed. Self-motivated and self-sustaining practice is the activity in which self-regulation is developed to the sophisticated levels required for literacy. Until readers and writers are gaining sufficient satisfaction from the intrinsic rewards of reading and writing to motivate this authentic practice of literacy, they are unlikely to achieve anything but spurious forms of response to print. Indeed, they are likely to remain at fundamentally pre-literate levels despite intensive direct instruction.

A problem highlighted by this model of social learning, and noted above, is the radically changing role of the teacher as she moves from the highly visible and impressive stance she must take in the demonstration mode; through the gentle, hand-in-hand sharing of the participant mode; to the inconspicuously "absent" or almost-invisible-but-still-available stance of the practice mode. As the wheel turns full circle, another remarkable change of stance is demanded as the teacher, now captured by the children's desire to display their growing skills, seek her out as the special, affirming audience whose respect and approval are valued above that of peers or strangers. She changes stance finally to take up the validating receptiveness of the special audience as the children enter the performance mode.

Performance and Validation

The need to display even small improvements of skill or to share an enthusiasm arising from a reading or writing task follows naturally from self-regulated practice. Such displays of skill deserve validation ranging from sharing in a genial community to receiving approval from someone looked up to either within or beyond the classroom. Simple acknowledgement of membership in such a community beats ranking any day. Just because you cannot yet read or write as well as other members does not preclude full acceptance — validation is distinctly different from selective or exclusive reward. Literacy learning demands a lot of validating — years of it every day.

The healthy literacy classroom rapidly becomes product-rich without external pressure being exerted to produce it — story-writing, publishing, play reading, audience reading, literacy-generated research,

and a host of other activities, all add to the hum of a community using literate skills for authentic and satisfying purposes. The walls are bursting with displays of children's output and all manner of studies are arising from reading and discussion. A healthy literacy classroom is a good place to be in.

Reading Recovery in Light of the Model

Never having been trained as a Reading Recovery teacher, nor taught in that context, I am in no position to speak with any authority on the subject. However, I have been an admirer of Marie Clay's research for a professional lifetime, and indebted to it in countless ways, proud to be an early colleague. Reading Recovery brings together that vast and learned body of research, unparalleled in the field of literacy, into a pragmatic system of instruction that may properly boast of documented success in its undertaking to remedy early literacy failure in a way which no other international program of intervention approaches. Like its author, the program is neither ideological nor doctrinaire, and I am very conscious of the scepticism about theory that the program represents. By comparison, my own work, although directed to general classroom teaching rather than to remedial intervention, has been patchy, superficial, hortative, and most suspectly, theoretical. I am mindful of the dangers of ideology. As W. J. T. Mitchell (1986) puts it in his *Iconology: Image, Text, Ideology:* "... that is just the paradox of ideology: it is not just nonsense or error, but 'false understanding,' a coherent, logical, rule-governed system of errors (p. 172).

I do quite sincerely trust that my humble contributions to speculation about literacy and learning do not fall into that category. It is certainly my fervent hope that the ideas I have put forward about "acquisition" and social learning will, if they are worthy of it, attract research and enquiry — and *that*, hopefully, of a depth and penetration so evident in the studies that validate the Reading Recovery Program — and such as I have had neither the wisdom nor the opportunity to undertake.

Because I have been associated with the need to humanise instruction and quite mistakenly and illogically characterised as being opposed to structure and rigorous precision in teaching, I have often been expected to oppose the highly efficient intervention strategies of Reading Recovery. Far from having any sympathy for this point of view, I have always asserted that I know of no more balanced and humane system of instruction in any field. An instructional system is humane when it supports the learning integrity of clients and has the effect of accelerating their progress, maximising their skill and sustaining their sense of personal dignity. Reading Recovery does all of these things superlatively, and I believe that in being able to do so — in trained hands — the program represents the soundest principles (Routman, 1996). Indeed, in providing for a balanced range of social priorities, learning strategies, and instructional imperatives it is quite unique. Let me mention just a few.

Marie Clay's research was the first to identify and support the absolutely critical role that self-correction plays in early language learning, and there is no program that so systematically and effectively provides for it. Close observation of the program with individual children over several months of instruction demonstrates the movement from dependence and uncertainty to independence and self-assurance in the context of literate tasks. The instruction leads very deliberately to the creation of a self-improving and self-sustaining system of operation. Anyone curious about inducing healthy processes of self-regulation and self-correction could do no better than study the detailed teaching strategies of Reading Recovery.

The program is built around the processing and the creation of authentic texts. Because of the quality of little books processed in great quantity and with assured success, it is easy for the teacher to introduce the material with genuine enthusiasm, and to establish a strong bond based on shared pleasure. A large proportion of the daily program is participatory in the true sense, providing scaffolded support and a range of inducements to stretch insight and skill to new levels within the proverbial "zone of proximal development."

Each day there is also the opportunity, in handling the text introduced in the previous session, to operate quite independently as the teacher keeps the "running record," and without that corrective intervention that produces dependence and undermines self-assurance. In producing their own short written text and participating in the analysis of it, the clients are led into essential engagement with essential print and phonemic detail through work on deeply meaningful, personal text.

The success of the program rests, of course, on the host of factors built into the meticulous training of teachers at the level of detail and precision, but the structure of the program reflects quite clearly the priorities of "acquisition learning" as described in our study. The movement from emulation through participation and committed, self-regulated practice stands out very clearly, and the opportunity to be validated in successful performance must be one of the features that make this program unique. The certainty of daily successful performance is, of course, assured by the precise monitoring of levels and the meticulously accurate choice of material that keeps the client at a constant level of challenged success.

The structure and techniques of Reading Recovery were not based on an untried theory but were gradually formulated with careful pragmatism through extensive trial and error and massive detailed research. The procedures developed and were applied because they *worked* in the setting of six-year-old intervention. They display eminently teachable strategies — and also strategies which teachers can be trained to teach successfully. Arguing backwards we can ask whether or not the hypothesis about the interactive nature of literacy learning is borne out by the Reading Recovery model. To the partial extent that it is possible to make such a judgement free from bias, this would appear to be the case — the two models appear to be largely consistent. Since the model of social learning explored above has wider implications for classroom application across the grades, it may be hoped that teaching strategies from Reading Recovery will be widely explored as pointing to practical ways in which social learning strategies may be applied throughout schooling. It is also to be hoped that such ventures will receive a comparable degree of research and pragmatic testing in teaching situations, as has been the case with Reading Recovery. It is my impression that this process is well under way, particularly in the States.

In describing the phases of social learning so distinctly above, the impression may have been given that a sound instructional program based on the model would be structured to represent the four phases in markedly distinct organisational ways. This is far from the case: it is the principles involved that must be given expression, together with the crucial requirement that the teacher should be capable of taking up those very different relational stances in response to the needs of learners. This is not an easy thing to understand, let alone carry out in a classroom of many children. It is even harder, in some respects, to replicate in a dedicated and pressured half hour of intensive individual instruction. Reading Recovery, properly understood, fulfils that function as nearly as might be possible within the restrictions of time and of natural social engagement — and with manifest success.

Footnotes

1. One is tempted to respond that, far from establishing a distinction with "learning," these would be highly desirable conditions for most of the processes that we *do* refer to as "learning" — especially, "the acquirer knows that he needs to acquire the thing he is exposed to." The only exception would be "natural settings" — which we would forlornly *wish* to associate with schools and other educational institutions.

2. The contrast here is with "instruction" in the traditional sense, but historically this contrast has included the Behaviourist concepts of learning, which are not seen to contain a meta-cognitive element. Conversely, it is by no means obvious that the acquisition of speech is accomplished without a significant degree of meta-knowledge. I would wish to argue that meta-knowledge is crucial to "acquisition learning."

3. If the teaching of spoken language *in schooling* (as distinct from that picked up in infancy) at some stage needs to become formal, at what stage should this occur, and for what reasons? (Because *schools* are formal or because spoken language now *becomes* formal?) Conversely, do *all* of the tasks of reading and writing taught in school need to be formalised? How is this to be related to the many varied levels of emergent or early literacy acquired preschool without instruction? Are all new entrants to school to be taught in the same way? Further, are the levels of meta-cognitive knowledge about literacy that have been acquired before school entry, and often displayed quite consciously, to be regarded as spurious, or improper, or even undesirable? If meta-cognitive awareness can be developed only by abstract and formal instruction, how do we account for the meta-cognitive sophistication about literacy displayed by a small percentage of pre-schoolers, as evidenced copiously in the professional literature? How do we now define reading readiness?

4. Wertsch (1985) notes: "...because the external processes from which internal ones derive are necessarily social, internal processes reflect certain aspects of social structuring..." and quoting from Vygotsky (1978): "The very mechanism underlying higher mental functions is a copy from social interaction; all higher mental functions are internalized social relationships... Their composition, genetic structure, and means of action — in a word, their whole nature — is social" (p.66).

5. Although Bateson (1972) appears to countenance the possibility of *animals* being capable of deutero-learning or learning-to-learn in some real sense.

6. In her study of the Cambridge/Lesley Literacy Project in which the four phases of social learning were deeply explored with a number of classes at Longfellow Primary School over two years, Shelley Midkiff-Borunda made the following comments:

> In both the Shared Book Experience Environment and the Doing Environment there was a supporting preponderance of interactions that were social and cooperative in nature. The give-and-take negotiations between teachers and students and among students during shared readings seemed quite different in their character – as well as their abundance – from the interactions normally occurring in elementary classrooms. These interaction patterns, termed "cooperative negotiations," were dominant in both environments. It seemed that these social interactional patterns were so powerfully demonstrated in the teacher-centred Shared Book

> Environment that they emerged in the student-centred Doing Environment without direct instruction by adults. (p. 11-12)

and in concluding statements, she says:

> Detailed observations of classroom behavior have confirmed the validity of the acquisition model for predicting the transfer of behavior from observation of demonstrations and participation to role-playing and performing. Thus the premise of the acquisition model – that students given the opportunity to observe and participate in demonstrations of real reading and writing and then to both role-play and perform will achieve competence in literacy – appears to be valid. (p. 253)

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Biographical Information

Don Holdaway, international author and scholar, has been involved in literacy initiatives in school systems in New Zealand, Australia, Canada, and the United States. He has presented and published widely on the topic of literacy learning, including books such as *The Oral Foundations of Literacy, The Foundations of Reading, Literacy and Early Childhood,* and *Stability and Change in Literacy Learning: The Early Eighties.* He was the first to publish "Big Books" and teaching guides for Shared Book Experience procedures, a concept that has been duplicated worldwide. He has served in a variety of teaching roles at such places as Lesley College in Cambridge, MA, Auckland Teachers' College in New Zealand, Adelaide College of the Arts and Education in Australia, and the University of Western Ontario in Canada. In May 1999 Don Holdaway was inducted into the International Reading Association's Hall of Fame.

Is Early Literacy Intervention Effective for English Language Learners? Evidence from Reading Recovery

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Abstract

The literacy achievement of 25,601 first-grade students who received Reading Recovery tutoring services, from school year 1992-93 to 1997-98, is examined in order to evaluate the performance of children in this group who were English language learners. The children in the Reading Recovery Group were compared with a Random Sample Group of 18,363 first graders drawn from the classroom population of children not identified as needing assistance, and with a Comparison Group of 11,267 first-grade children who were in need of Reading Recovery but did not receive it because of a lack of resources. The results suggest that Reading Recovery is an effective intervention that narrows the reading achievement gap between native and non-native speakers. Because some school administrators and teachers appear to lack confidence in the potential for non-native speaking children to benefit from this literacy intervention, implications of these perceptions are discussed with respect to key principles of Reading Recovery's implementation in schools.

Educators, parents, and policy makers continue to debate the most effective instructional approaches necessary to provide a meaningful education to English language learners; that is, children who are learning to speak English as an additional language (Collier, 1992; Wilkinson, 1998). In addition, there is continuing concern about educational inequalities in academic achievement between language-minority students and native English speakers (Cummins, 1986) as schools serve increasing numbers of English language learners from diverse language contexts (Hornberger, 1992; Lucas, Henze, & Donato, 1990). The purpose of this study was to evaluate Reading Recovery as a supplemental literacy program for first graders, and to discuss whether this early intervention contributes to English language learners' capacity to reach native speaker norms for academic achievement, specifically in terms of reading. In other words, we were interested in investigating whether Reading Recovery is effective as an instructional intervention for English language learners and, thereby, contributes to reducing inequalities in academic achievement between native and non-native speakers educated in monolingual English classroom contexts.

Research on Literacy Instruction for English Language Learners

In addressing the question of whether Reading Recovery is effective for children who are learning English as an additional language, we reviewed research studies in the following areas:

- Evaluation studies of the effectiveness of classroom literacy instruction on the reading achievement of children who are English language learners.
- Evaluation studies of the effectiveness of Reading Recovery as an early intervention for all children as well as English language learners.

Research on Classroom Literacy Instruction

An examination of research addressing the effectiveness of classroom literacy instruction for English language learners reveals that the field is dominated by questions regarding the use of a language other than English for instructional purposes. In particular, researchers have compared the academic achievement of students with English as a second language who have received classroom instruction in a variety of first and second language settings.

Ramirez and colleagues (Ramirez, Yuen, Ramey, & Pasta, 1991), compared outcomes for students in the more typical bilingual program adopted by schools, that is, "early-exit" instruction involving part-day Spanish instruction in kindergarten through second grade, with two alternative programs. These alternatives were (a) "late-exit" bi-lingual programs with initial instruction in Spanish, followed by balanced (50%/50%) instruction in English and Spanish from kindergarten through sixth grade, and (b) "structured immersion" programs with instruction given only in English. The Ramirez study was a longitudinal evaluation that followed children in each program from grades one to three. There were 319 children in the early-exit program, 233 children in the structured immersion program, and 170 children in the late-exit program. An additional group of 154 students in the late-exit bi-lingual program continued in the study from fourth to sixth grade in order to capture the particular outcomes of this instructional design.

According to Collier (1992) the Ramirez study confirmed evidence from numerous other investigations examining long-term achievement of English language learners. Improved academic achievement in a second language is positively related to the support children receive for education in their first language. For example, in Ramirez et al. (1991) the children in all three programs did equally well at first grade on the Comprehensive Test of Basic Skills in reading and mathematics. However, by fourth grade there were strong differences in academic performance between cohorts; notably children in the late-exit bilingual program were making faster progress in both English reading and math than children in the early-exit and structured immersion cohorts.

A meta-analysis of research on literacy achievement for English language learners, included in the report by the National Research Council's Committee on the Prevention of Reading Difficulties (National Research Council, 1998), confirms the potential risks to sustained achievement levels when children experience initial literacy instruction in a second language:

> The accumulated wisdom of research in the field of bi-lingualism and literacy tends to converge on the conclusion that initial literacy instruction in a second language can be successful, that it carries with it a higher risk of reading problems and of lower ultimate literacy attainment than initial literacy instruction in a first language, and that this risk may

compound the risks associated with poverty, low levels of parental education, poor schooling, and other such factors. (p. 234)

Despite these findings, school systems are often faced with few instructional choices other than immersion in monolingual English classes for English language learners. Schools have to identify instructional approaches that foster effective literacy learning for all children, including English language learners speaking a variety of primary languages, such as Spanish, Chinese, Russian, Arabic and many others. Many investigations in the area of literacy acquisition have examined the instructional contexts that best support such learners.

For example, New Zealand has recently experienced net migration gains of peoples from the Pacific Islands and Asia who speak a variety of languages. Wilkinson (1998) reported on the New Zealand data from an international evaluation of educational achievement in 32 countries. These data revealed that despite the high literacy levels of many nine- and fourteen-year old New Zealand students, those whose home language was different from the language of school (i.e., English) were performing below native English speakers on comprehension and word recognition measures. Frequent assessment of students' reading and regular reading aloud by the teacher were instructional practices correlated with closing the achievement gap on both these measures.

In summary, there is strong evidence of the positive impact on reading achievement of initial literacy instruction being conducted in a child's native language. However, the above research also suggests that where native language literacy instruction is not available, instructional practices that best support the literacy achievement of English language learners must be identified if inequalities in reading achievement are to be reduced.

Research on Reading Recovery Instruction

Many school systems, wanting to address the needs of "at-risk" literacy learners including those children who speak languages other than English, have implemented Reading Recovery as an early intervention and prevention program (delivered in English) that supplements classroom literacy instruction during first grade. Skilled teachers, specifically trained for the purpose, provide daily, 30-minute lessons to those children identified as having serious literacy learning difficulties and are the lowest performing readers in the cohort. The aim of Reading Recovery is to ensure that children receiving this individual tutoring catch up as quickly as possible with their classmates, usually in 16 to 20 weeks, so they can continue to make progress in reading and writing in a variety of classroom instructional contexts without needing further special assistance.

Reading Recovery for all students. There have been many evaluations of Reading Recovery conducted by those implementing the program. Lyons (1998) reviews over ten years of data collected as part of a national design, demonstrating the effectiveness of the program. From 1985 to 1997, a total of 436,249 first grade children entered the program, of which 60% met the criteria for discontinuing; that is, they read at or above the average of their class by the end of first grade and were able to continue to improve in literacy learning without needing further intervention. Most of the remaining children made progress, but did not have enough time in the school year to complete their programs. These are impressive results, considering that all children enrolled in Reading Recovery were the lowest performing readers in their first grade cohort.

Other studies, including those conducted by independent evaluators, have reported similar favorable results. Shanahan and Barr (1995), in their independent evaluation of Reading Recovery, conclude that Reading Recovery attains its stated goal by bringing the children's learning up to that of their average-achieving peers. They report that many children leave the program with well developed reading strategies, including phonemic awareness and spelling knowledge. However, the researchers point to problems in reporting approaches that may inflate the learning gains of Reading Recovery children. Shanahan and Barr call for clearer specifications of success, the documenting of outcomes on all students receiving Reading Recovery, and more rigorous research studies.

Other researchers of Reading Recovery who were seeking to assess the program's effectiveness, have suggested developing predictive models that would identify the characteristics of students most likely to succeed in Reading Recovery. For example, such a model has been proposed by researchers driven by cost-efficiency considerations (Batelle Institute, 1995). Identifying children more likely to succeed, it is argued, would drive down costs. By avoiding children predicted to fail, Reading Recovery could serve more children, more quickly.

Such an approach is dismissed by Reading Recovery professionals for practical and ethical reasons. By admitting the lowest scoring students, it is countered, Reading Recovery is potentially more cost-effective, because a significant number of these children who succeed in Reading Recovery do not later become a burden to the system, in terms of costly supplemental services in higher grades. In addition, children who are not among the most needy are the ones who are more likely to "survive" without costly special services, and benefit from classroom instruction alone.

Reading Recovery for English language learners. In our experience, English language learners, as a group, are students vulnerable to cost efficiency considerations and may be regarded as less likely to succeed in Reading Recovery as a monolingual English literacy intervention. Until recently there have been few attempts to disaggregate the impact of Reading Recovery on the performance of children who are learning English as another language. However, a study conducted in England included evidence of success of English language learners in Reading Recovery (Hobsbaum, 1995). More recently, Neal and Kelly (1999) examined reading and writing success for two groups of bi-lingual children receiving either Reading Recovery, where instruction is delivered in English, or Descubriendo La Lectura, a reconstruction of Reading Recovery, where intervention instruction is delivered in Spanish while children are receiving classroom literacy instruction in Spanish. The results indicated that both populations of students made progress and reached average levels of classroom literacy performance.

Purpose of the Study

Where bi-lingual education is not available, schools are faced with the challenge of how to foster high levels of literacy achievement for English language learners effectively. Evidence of Reading Recovery's effectiveness encourages school districts concerned with improving literacy achievement to adopt this program as a "safety net" for low performing students. We presumed it would be valuable to add to evaluations of Reading Recovery's contribution to the literacy achievement of English language learners, and to examine the extent to which it represents an appropriate educational program for this group of students.

In particular we were interested in whether such a contribution closes the achievement gap typically observed between native and non-native English speakers. To understand the impact of Reading Recovery on the reading achievement of first graders who are English language learners, we sought to answer the following questions:

1. Are there differences in outcomes, rate of completion, and delivery of Reading Recovery as a literacy intervention for children who are English language learners, as compared to native English speakers?
2. Does Reading Recovery narrow the gap in reading achievement between English language learners and native English-speaking children in first grade?

The focus of our attention centered on distinctions in Reading Recovery services and program performance between native and non-native English speakers. This reflects our broad interest in how, as an early literacy intervention, Reading Recovery works for children who have varying levels of competence in the English language.

Method

Measures and Criteria for Evaluating Success

The data used in this study were drawn from the *Reading Recovery Data Sheet*, produced by the National Data Evaluation Center at The Ohio State University. This is a national questionnaire used to record reading and writing scores, demographic information, and other data on all children selected for Reading Recovery, as well as on a sample of children randomly drawn from the general first grade classroom population.

Children are selected for Reading Recovery based on their performance on six literacy assessment tasks included in *An Observation Survey of Early Literacy Achievement* (Clay, 1993a), which were administered by Reading Recovery teachers. The children selected for services are the lowest performing first-grade children, deemed most "at-risk" of literacy failure in regular education classrooms. Clay (1993a) reports on the satisfactory measurement characteristics of the observation survey tasks, which assess letter identification (LI), sight reading vocabulary (Ohio Word Test = WT), concepts about print (CAP), writing vocabulary (WV), the capacity to hear and record sounds in words (HRSIW), and performance in reading a graded set of previously unseen texts (Text Reading Level = TRL). These graded texts have been benchmarked for use nationally in Reading Recovery and range in difficulty from pre-primer through sixth grade, leveled from 1 to 30 for use in first grade. For example, successful reading of levels 16 to 18 indicates appropriate grade level performance for the end of first grade to the beginning of second grade. In administering *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) to children who speak English as a second language, there is a minimum requirement that they understand teacher-given directions for the tasks.

Evaluating success in Reading Recovery is based on two sources of information. One source is the combined judgments of the child's Reading Recovery teacher and the classroom teacher that the child is reading at or above the average performance of classroom peers. These judgments are checked against a second source of information, that is, testing at exit from the program using all six tasks on *An Observation Survey of Early Literacy Achievement* (Clay, 1993a). The specific decision to "discontinue" the tutoring of an individual child therefore depends on several sources of information and is evaluated against the following two criteria:

1. The extent to which the child has developed a self-sustaining learning system so that he or she can benefit from classroom instruction without the need for further intervention.
2. Results from exit testing by an independent observer (i.e., a teacher other than the child's Reading Recovery teacher) that indicate the child is reading close to his/her average performing peers. Note that the group's average band is based on the observation survey performance of a classroom random sample (mean +/- .5 SD), which is used as an empirical frame of reference to evaluate this achievement at the end of the school year.

Classroom reading achievement varies widely from district to district. "Discontinued from tutoring" as a label, is a relative criterion represented by varying achievement levels in different schools within sites (districts or collections of districts) implementing Reading Recovery. A "self-extending learning system" as a criterion for exiting the program depends on the clinical judgment of a Reading Recovery teacher that the child's observed reading and writing behaviors are evidence of cognitive capacities to make further literacy learning gains without continued individual tutoring (Clay, 1991). This criterion of a self-extending learning system is intended to be universal across all participating districts. A consistent teacher-training model in Reading Recovery, and continued support to teachers, ensures adherence to this criterion.

Participants

The selection of children into Reading Recovery is a nationally uniform procedure driven by the principles of its original design (Clay, 1993b). The children included in this study were initially identified for Reading Recovery as being among the lowest 20% of their first grade in reading according to their classroom teacher's judgment. Administration of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) by the Reading Recovery teacher provided further information to select the lowest performing children in need of immediate literacy tutoring. The national evaluation design calls for the testing of Reading Recovery children at the beginning of the school year, at program entry and exit, and at year-end.

The *Reading Recovery Group* included in this study comprised all children served regardless of their program status — successful, appropriately referred for specialist services including special education, having incomplete programs, or moved away from the school. Our choice was to include *all* of these students in the study, even if their exposure to Reading Recovery was minimal (a couple of lessons), in order to avoid any ambiguity in the definition of the intervention, a problem that plagued some previous research on Reading Recovery (see Shanahan & Barr, 1995).

Not all children who are initially identified as needing Reading Recovery eventually receive services. The most needy children are served first. Of the remaining children, some make progress through regular classroom instruction during the year, and thus do not need services. Others remain "at-risk," but do not receive Reading Recovery due to lack of resources. All of these children comprised the Comparison Group for this study. The evaluation design implemented by sites affiliated with New York University expands on the national design by collecting data on this *Comparison Group*, which we treat as an approximate solution for a control group of "at-risk" students.

The remainder of the classroom population, i.e., children generally considered not at-risk, served as a basis from which a random sample was drawn for each Reading Recovery site, again under the uniform procedures. The *Random Sample Group* was drawn from approximately the top 80% of

students in Reading Recovery classrooms and was tested at the beginning and end of the school year, using *An Observation Survey of Early Literacy Achievement* (Clay, 1993a), in order to provide a benchmark for reading achievement in a Reading Recovery site.

From the total number of 55,875 students in the groups (Reading Recovery, Random Sample, and Comparison) in NYU-affiliated sites, 644 children for whom information on native language was not available were eliminated from the study. The remaining 55,231 children were identified as English native speakers ("English" = 45,303 children), fluent non-native speakers ("Fluent ESL" = 6,388 children), and non-native speakers with limited English proficiency ("LEP" = 3,540 children) based on the data collected through the national Reading Recovery questionnaire (see Table 1). Children were characterized as such either through the results of a language proficiency test, if such a test was given by a district, or through classroom teacher judgment. All of the children came from monolingual classrooms, where instruction was in English.

Of all English language learners in the study, Spanish was the native language for the majority of the limited English proficient students (54%), with Chinese spoken by 26%, and other languages by 19%. Again Spanish was the dominant native language for language learners who were fluent in English — 74% spoke Spanish, 6% spoke Chinese, and 20% spoke other languages.

Reading Recovery Sites

The database used in this study spans six years of Reading Recovery implementation (school year 1992-93 to school year 1997-98) at 37 Reading Recovery sites affiliated with New York University. These sites, which may be a single school district or a consortium of districts working together to implement Reading Recovery, represent a variety of educational environments, including urban, suburban, and rural settings. Districts also varied in the number of years of Reading Recovery implementation, the number of certified Reading Recovery teachers available relative to need for service in schools (i.e., level of coverage), and the level of their experience in Reading Recovery.

Data Analyses

The first research question, which concerned the outcomes, completion rates, and delivery of Reading Recovery, was answered by a comparison of the proportion of children of different language

Table 1. Native Language Composition of Study Samples

Sample	Native Language			Total
	English	Fluent ESL	LEP	
Reading Recovery				
Count	20863	2924	1814	25601
%	81.5	11.4	7.1	100
Comparison Group				
Count	8845	1427	995	11267
%	78.5	12.7	8.8	100
Random Sample				
Count	15595	2037	731	18363
%	84.9	11.1	4.0	100

Note. LEP = Low English Proficiency

backgrounds who were selected to receive Reading Recovery services, who completed full Reading Recovery instruction, and who were deemed successful in Reading Recovery. Pearson's Chi-square tests were used to report on the statistical significance of the differences between two groups of English language learners (LEP and fluent ESL) and native English speakers (English).

To answer our second question, whether Reading Recovery closes the literacy achievement gap between native-speakers and English language learners in first grade, proved a challenging task, considering that our data derive from a field implementation of Reading Recovery in a variety of educational settings. To search for differences we used analysis of variance, with *language* (English, Fluent ESL, and LEP) and *sample group* (Reading Recovery, Random Sample, and Comparison) as fixed factors; *Reading Recovery Site* as a randomly varying factor; and *Text Reading Level* as a dependent variable.

By including *Reading Recovery Site* as a random factor in our model, we took into account the similarity of students within sites, due to shared curriculum, educational policies, geography, and other features. Differences between the groups of students who share educational settings are all the more important when one considers the heterogeneous nature of school systems that implement Reading Recovery in the wider New York metropolitan area. Including this source of variation explicitly provided us with better estimates of error and, thereby, gave us more confidence in estimates of effects, which were of primary interest to us. Specifically, the interaction of *language* and *sample group* effects represents a direct test of the hypothesis that the differences in reading achievement between language groups are smaller for Reading Recovery students than they are for the other two groups of first-graders (Random Sample Group and Comparison Group).

Results

Analysis of Outcomes, Completion Rates, and Delivery of Reading Recovery

The first study question concerned the extent to which there was any evidence of differences in outcomes and completion rates between Reading Recovery children from the three language groups. In addition we questioned whether there was equity in the delivery of Reading Recovery to children regardless of their native language background.

Program outcomes. We initially analyzed whether there were differences in outcomes for Reading Recovery children who were English language learners, consisting of fluent and limited English proficient,

Table 2. Reading Recovery Program Success and Program Completion Rates for Three Language Groups

		Outcome		Completion	
Language		Successful	Not	Complete	Incomplete
English	Count	12975	7888	15756	5107
	%	62.2	37.8	75.5	24.5
Fluent ESL	Count	1938	986	2253	671
	%	66.3	33.7	77.1	22.9
LEP	Count	1120	694	1348	466
	%	61.7	38.3	74.3	25.7
Total	Count	16033	9568	19357	6244
	%	62.6	37.4	75.6	24.4

as compared to native speakers. Table 2 presents program success rates for children in three different language groups (English, Fluent ESL and LEP children) as well as rates of program completion.

The success rates in Table 1 are expressed as a percentage of all students served in Reading Recovery. Of the 25,601 children served in this six-year period, 16,033 (63%) successfully exited the program, while the remaining 9,568 (37%) children were not successful. Since these figures account for all children served in the program, the "not successful" group includes children who moved from the school, those who lacked opportunity to complete a full program before the end of the school year, and those who were recommended for other services, including special education.

Statistically significant differences (chi-square = 18.960, $df = 2$, $p < 0.0001$) in success rates were observed among the language groups. Fluent ESL children have a higher success rate (66.3%) than either native English speakers (62.2%) or LEP students (61.7%). However, it appears that the limited English proficient children were just as successful as their native English-speaking peers.

Completion of Reading Recovery. In addition to considering success rates for Reading Recovery children, we also examined the extent to which children from different language groups had an opportunity to receive at least sixty lessons (a "full program" definition established when the program was first implemented in the United States), regardless of whether they successfully exited the program or not. We were interested in whether all Reading Recovery children had an equal opportunity to be successful, by receiving a full Reading Recovery program, regardless of their language background and English proficiency. Analysis of the data demonstrated that language proficiency was not a factor impacting children's opportunities to complete the program. There were no significant differences in program completion rates (see Table 1) between the three language groups (Chi-square = 5.046, $df = 2$, $p = 0.08$). In addition to student mobility, referral to special services was the most frequent reason for exiting the Reading Recovery program before completion. The analysis of completion rates suggests that these factors (mobility and referral) did not differentially impact Reading Recovery students from these three language groups.

Program delivery. In order to examine the selection process for Reading Recovery, we analyzed the language composition of each study sample — Reading Recovery Group, Comparison Group and Random Sample Group. We observed that the Reading Recovery Group contained a disproportionate number of native English speakers with respect to the Comparison Group (81.5% vs. 78.5%). This difference is statistically significant, as indicated by Pearson's Chi-square test (chi-square = 50.3, $df = 2$, $p < .0001$). Both Fluent ESL students (12.7% vs. 11.4%) and, especially, LEP students (8.8% vs. 7.1%), were less likely to be served in Reading Recovery than their peers who are native English speakers (and, thus, became part of the Comparison Group).

This finding is intriguing, considering that Reading Recovery targets the lowest performing first graders. It was revealed by an analysis of the measures from *An Observation Survey of Early Literacy Achievement* (Clay, 1993a), taken at the beginning of the school year, that LEP students who were selected into Reading Recovery indeed had somewhat higher scores than the LEP students who were not selected. In contrast, between English speaking and Fluent ESL students, it was clear that students with the lowest observation survey scores were the ones selected. This pattern of results indicates that sometimes decision-making may have been influenced by factors other than literacy assessment and this will be discussed later.

Table 3. Year-End Observation Survey Scores

Sample	Mean Score TRL	WV	OWT	HRSIW
Reading Recovery				
English	15.73	46.33	16.74	33.77
Fluent ESL	15.26	47.20	16.79	33.31
LEP	14.61	48.09	16.52	33.10
Comparison Group				
English	12.21	37.55	14.95	30.68
Fluent ESL	10.05	34.45	13.53	28.26
LEP	7.66	32.92	12.12	25.54
Random Sample				
English	19.78	47.00	17.97	34.22
Fluent ESL	16.16	43.43	16.90	32.25
LEP	11.72	38.19	14.94	29.34

Note. TRL = Text Reading Level; WV = Writing Vocabulary; OWT = Ohio Word Test; HRSIW = Hearing and Recording Sounds in Words Test; LEP = Low English Proficiency.

Analysis of Reading Achievement by Group

Consistent with the Reading Recovery evaluation design, four of the tasks from *An Observation Survey of Early Literacy Achievement* (Clay, 1993a), including text reading, writing vocabulary, word recognition, and hearing and recording sounds in words, were administered at the end of the school year to all Reading Recovery children, as well as to the Random Sample, and to the children who were initially diagnosed as "at-risk" but were not served in Reading Recovery (i.e., the Comparison Group).

Average year-end scores for these three sample groups (see Table 3) appear to support the hypothesis that Reading Recovery closes the reading achievement gap between native and non-native English speakers. On all four measures, smaller differences in reading and writing achievement associated with native language proficiency were evident for Reading Recovery children.

The Text Reading Level (TRL) task is by far the most comprehensive and clinically meaningful of the tasks. The TRL scores provided in Table 3 represent the difficulty level achieved by students on a series of previously unseen, graded text passages, read with at least 90% accuracy. In the context of classroom instruction these results indicate that LEP children who had received Reading Recovery services were reading texts with a difficulty level equivalent to a Grade 1 basal reader. In contrast, LEP students in the Random Sample, a group that had not been identified as needing supplemental tutoring, were reading at only the Primer level at the end of first grade.

Table 4. Tests of Between-Subjects Effects: Spring Text Reading Level

Source	F	df	Sig.
Language	34.2	(2,194.3)	.000
Sample	65.1	(2,153.1)	.000
Site	7.1	(36,106.6)	.000
Language X Sample	11.7	(4,1093.9)	.000
Language X Site	3.3	(70,158.7)	.000
Sample X Site	4.5	(72,239.7)	.000
Language X Sample X Site	1.5	(129,50670)	.001

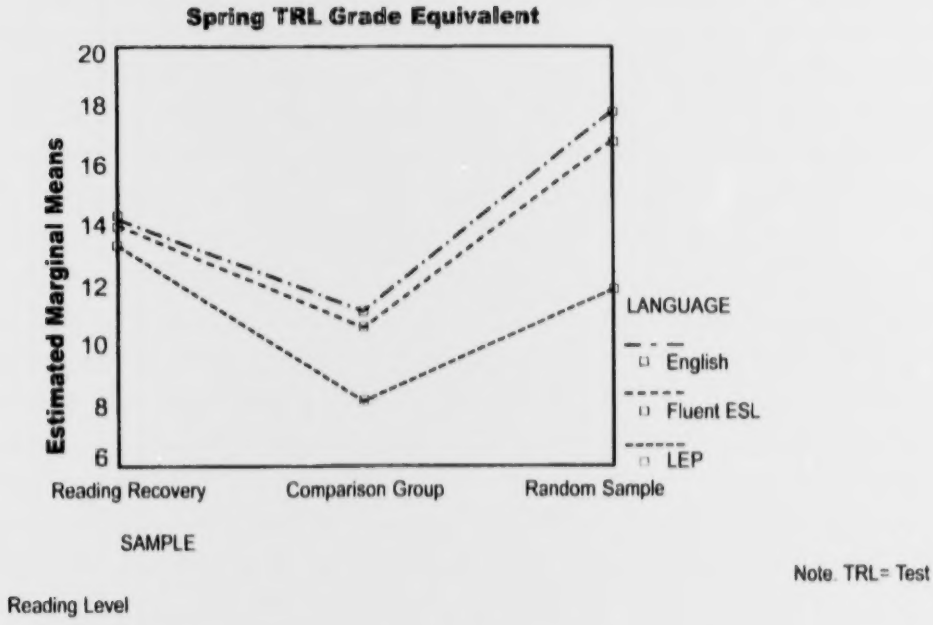

Figure 1. Interaction Language X Sample: Spring Text Reading Level

For two of these four observation survey measures, Hearing and Recording Sound in Words (sentence dictation task) and the Ohio Word Test (high-frequency word list), further statistical analysis was not advisable due to strong ceiling effects which resulted in skewed distributions of students' scores. For brevity's sake, we report the analysis of variance for Text Reading Level only, while noting that using Writing Vocabulary as a dependent variable led to exactly the same pattern of results.

An analysis of variance was conducted with *language* and *sample* as fixed factors, *site* as a random factor, and text reading level as the dependent variable. Tests of the main effects and interactions are presented in Table 4. The interaction of *sample* and *language*, which represents a direct test of the hypothesis regarding Reading Recovery's impact on the reading achievement gap, is graphically illustrated in Figure 1. All of the tests were statistically significant, and differences among means were in the expected direction.

It is apparent that the gap between the three language groups varied significantly, but was much smaller for children who received Reading Recovery, than for the children who did not. Non-native English-speaking children, especially LEP children, lagged behind native speakers both in the sample drawn from the lower (Comparison Group) and higher (Random Sample) end of the classroom reading achievement spectrum. Among Reading Recovery children these differences were drastically reduced.

On average, Random Sample children scored higher than those children considered "at-risk." This result inevitably follows from the evaluation design, where one group is sampled from the higher and the other from the lower end of the achievement range. Also, our definition of "Reading Recovery children" was all-inclusive, and did not omit children who were either unsuccessful or had incomplete programs. When the same analysis was conducted using only the children who were successful (63% of the cohort), the difference between Reading Recovery and Random Sample disappeared, as Reading

Recovery children scored on the level of their peers. The same pattern of results was evident when Writing Vocabulary (a timed word writing task) was used as a dependent variable, giving additional weight to our claim.

Analysis of variance also revealed a statistically significant three-way interaction, which indicated that "closing the gap" could not be fully generalized across all locations where Reading Recovery is implemented. Although seemingly problematic, such an effect was hardly surprising, given the variety of urban, suburban, and rural school districts, with diverse student populations that are characteristic of Reading Recovery sites in the New York metropolitan region. However, when initial differences among students, as expressed in fall scores on the Concepts About Print task, were taken into account, this interaction was no longer significant. (Note: Full Analysis of Covariance results are not reported here, but are available from the authors.)

Such a result, from the analysis of covariance, indicates that individual differences in pre-existing knowledge among students are one possible reason for this site-to-site variation, and not a failed implementation, or an ill fit of Reading Recovery as a literacy intervention in particular sites.

Discussion

This study has reported results from administrations of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) on 55,231 children. Of these children, 25,601 received Reading Recovery services in first grade during a six-year period from 1992 to 1998. Results have been used to evaluate whether Reading Recovery, as an early literacy intervention, is effective for students who were learning English as another language. In the following sections, we discuss the findings from this study by exploring several issues: (a) English language proficiency as a possible factor in whether children are selected for Reading Recovery services, (b) the relationship between reading achievement and English language proficiency, and (c) limitations and directions for further investigation.

English Language Proficiency as a Factor in Selection

The earlier analysis of success rates for children in Reading Recovery suggests that both native speakers and English language learners are equally likely to be successful and to complete the program. If anything, fluent ESL students are more likely to be successful than native speakers. This is an interesting outcome. Similar findings were summarized by Collier (1989), from studies of children who initially learned two languages simultaneously and outperformed monolingual students in the late elementary years on measures that included linguistic and metalinguistic abilities, cognitive flexibility, and concept formation. In part this is attributed to children's continued cognitive development in both languages.

Reading Recovery tutoring for these fluent ESL students, who initially experienced reading difficulties, may have contributed to language development in English, while other experiences (provided by parents, for example) contributed to continued cognitive development in another language. Such combined cognitive inputs may have allowed these children to begin outperforming their monolingual peers in literacy.

However, our analysis of the scores at the beginning of first grade on *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) suggested that the lowest performing among LEP children were not always selected for Reading Recovery tutoring. In addition, both Fluent ESL, and LEP

children are under-represented in Reading Recovery, with respect to other students "at-risk" in the Comparison Group (see Table 2). As indicated earlier, there may be several practices at the school level shaping such a pattern of results. For example, this pattern may reflect some schools' decisions to delay admission into Reading Recovery for children with English language learners, particularly LEP children, driven by a belief that their English language skills first need to improve to a certain level, before they can be considered for literacy tutoring.

Another practice may be that within a context of limited resources, there is sometimes *pressure* in schools to select students for Reading Recovery for whom progress appears to be more likely, and to exclude those for whom the prognosis appears poor. Anecdotal evidence suggests that both of these practices may reflect a perception among teachers and administrators, that children with limited English proficiency are not suited for Reading Recovery instruction. Whatever the reasons, these practices can lead to decreased opportunities for English language learners to receive the literacy tutoring which would benefit them immediately, according to the data presented in this study. In order to understand these practices more thoroughly, further attention needs to be paid to the effects of other programs and services offered to English language learners, in conjunction with Reading Recovery.

Attempts to predict the reading progress of an individual child initially identified as needing Reading Recovery, suffer from an inherent lack of validity, especially with the low levels of literacy skills that "at-risk" children possess before the first grade. Evidence from Reading Recovery research (Clay, 1993b) demonstrates that it is only after ten weeks in the program that predictions of success can be made with any confidence. Even then predictions still carry a risk of error in at least 30% of cases. Continuous observation and diagnostic teaching (optimally 20 weeks) by a Reading Recovery teacher provides more reliable information on which to make valid and fair assessments on the level of the individual child, particularly when the child's classroom teacher raises questions about the need for referral to special education services.

Since the general pattern of results suggests that Reading Recovery "works" for all students, it is obviously important to ensure that language proficiency does not result in children's inappropriate exclusion from the program. Given the demonstrated effectiveness of the program for all language groups, districts can have confidence that Reading Recovery is an appropriate instructional intervention for these children as well.

Reading Achievement as it Relates to English Language Proficiency

It is evident from the data that Reading Recovery not only contributed to improving the literacy performance of all three language groups (English, Fluent ESL, and LEP), but also reduced the variability in performance among them. Within the Random Sample and the Comparison Groups, however, differences between language groups persisted. At the end of the year, LEP children in both of these groups significantly lagged behind their fluent non-native and native English-speaking peers.

Without an intensive literacy intervention, such as Reading Recovery, non-native English speakers are likely to fall behind by the end of first grade. The data derived from this study indicate that a reading achievement gap exists, both for children initially thought to be "at-risk," and for all other students in first grade. Quality classroom instruction in the primary grades that is tailored to meet diverse learning needs is clearly called for as the first strategy in the prevention of literacy learning difficulties.

However, given the broader research findings on academic achievement in literacy for second language learners (Ramirez et al., 1991), we believe that it is unrealistic to assume that Reading Recovery, as a first grade intervention, can completely protect against the need for further supplementary help. Reading Recovery as an early intervention is designed to reduce the long-term need for remedial reading programs. In the increasingly demanding literacy environment of monolingual English school learning beyond the early grades, school administrators and teachers need to continue to monitor the language and literacy needs of non-native English speakers, and to provide periodic assistance where needed.

Limitations and Directions for Further Research

The general conclusion of this study points to the effectiveness of Reading Recovery tutoring in producing similar outcomes for students with different levels of English proficiency, and offers an appropriate solution for first graders initially experiencing problems in reading and writing. The national Reading Recovery evaluation design, which provided the data for this study, places constraints on the interpretation of the results that are even greater than those typically associated with correlational studies. This is especially true with respect to causality. Issues of program implementation in part determined the selection of students into groups for the purpose of the study. As such, the size of the Comparison Group ("at-risk" students who did not receive the program) was influenced by the level of program implementation in a school. Similarly, some of the clinically valuable measures administered under the Reading Recovery design are ill-suited for statistical analysis due to difficulty level and ceiling effects.

Apparent differences in reading achievement between native English speakers and English language learners may be influenced by other factors, such as characteristics of students (other than native language) and characteristics of their educational environments. Our design takes into account variation across sites, which has typically not been included as a factor in previous studies of Reading Recovery's effectiveness, and eliminates this source of bias from estimates of effects.

Future research studies should take a step further, and try to determine the extent of the influence of specific factors at both student and site levels. Other student characteristics, such as ethnicity, race, socio-economic status, cultural background, and the characteristics of students' native language, are likely to be important factors in the performance of students. Characteristics of Reading Recovery sites as educational environments, such as number of years of Reading Recovery implementation, level of coverage, teachers' experience, urban/suburban location, and district demographics, are also potential explanatory factors for the performance of students at-risk. A convincing case can even be made for the interaction of factors from these two levels (students and sites), especially in a metropolitan area that is characterized by considerable diversity of students.

For example, in some school districts, a number of English language learners may come from populations with relatively high socio-economic status, while native English speakers in some urban districts tend to be of low socio-economic status. In-depth consideration of factors such as these would help evaluation research move beyond general conclusions about the program's effectiveness, and make specific recommendations concerning early literacy intervention for diverse groups of at-risk students. Unfortunately, this diversity is extremely difficult to quantify and control for in this sample of students drawn from sites affiliated with NYU. However large, the sample used in this study lacked adequate

distribution of student characteristics over sites, which is more likely to be found in a national-level sample of Reading Recovery sites and students.

At least some of the issues raised by this study, such as decision-making about which students to admit into Reading Recovery, appear to be related to the characteristics of sites, but it is not possible to explore these hypotheses in great detail from the data at hand. However, a modified national Reading Recovery evaluation design, in place from school year 1998-99, does include additional descriptors on the teacher- and school-level (locale, teacher experience, level of implementation, to mention a few), which will enable more detailed analyses in the future.

Finally, how well the effects of this literacy intervention for English language learners transfer into sustained gains beyond first grade is an issue that remains to be explored. This is crucially important in the light of the fact that English language learners are more likely to be found on the wrong side of the gap in reading achievement, a gap that widens in the course of elementary education and beyond.

Conclusions

Selecting the lowest performing children for Reading Recovery is a key design principle of this program's implementation. We believe that doubts that may exist in some schools about fully adhering to such a principle with respect to English language learners are not supported by the data presented here. The results reported in Table 1 and Figure 1 represent strong evidence that the one-to-one tutoring offered in Reading Recovery constitutes an appropriate setting, in addition to the classroom, to support language and literacy development for children with limited English proficiency.

The substantial database on which we were able to draw allowed us to monitor various aspects of Reading Recovery's implementation and effectiveness. Without such a database across sites, and without the capacity from an external agency to analyze such data (in this case, New York University), identifying potential bias in the delivery of services to English language learners would not have been possible. This speaks in some ways to the value of school-university partnerships in program evaluation.

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Re-conceptualizing a Change Model: Implementation of the Early Literacy Research Project

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Abstract

The Early Literacy Research Project (ELRP) involved teachers in a process of significant reform, re-conceptualizing both curriculum content and classroom organization for teaching and learning as they worked to implement a program to maximize the literacy achievements of "at-risk" students in the early years of schooling. Using the Triple I Model (Miles, 1987) this study aimed to evaluate this model and to assess its relevance as a means of interpreting and monitoring change in schools. An examination of the change factors and their impact on school teams as they implemented improved teaching and learning strategies, was undertaken. Results from the study provided information in relation to the significance of particular factors as schools worked to reform their literacy practice. The study suggested that specific factors and others in combination were critical to the implementation of change in ELRP schools, with results leading to the development of a revised Triple I Model. It is suggested that this revised model provides a conceptual frame that may be used to assist schools in planning, monitoring, and explaining authentic school reform projects.

Change is now synonymous with the concept of education. Curriculum and school organization reform currently infiltrate every aspect of school life, with teachers in many instances expected to take on myriad initiatives and school improvement proposals.

The intention of this study was to monitor the process of change in schools as significant reforms were implemented and to identify factors that supported teachers as they worked to introduce changes for improving early literacy teaching programs. In order to examine the process of change systematically, an existing change model, The Triple I Model (Miles, 1987), was used. The study was designed to provide insight that clarified the complexity of curriculum reform while capturing individual definitions, descriptions, and meaning of events throughout the process of change. From the insights gained, the aim was to evaluate the Triple I Model and assess its relevance as a means of interpreting and monitoring change in schools.

The Early Literacy Research Project

The Early Literacy Research Project (ELRP) was a collaborative project of the Department of Education, Victoria, Australia and The University of Melbourne conducted over a three-year period (1996–1998). Initiated to ensure all Victorian students had access to a program to maximize the literacy achievements of students in the early years of schooling, the ELRP aimed to develop and evaluate the design, delivery, and funding of effective early literacy programs.

The focus of the ELRP in 1996 was to implement a program comprising the same elements as those in the "Success for All" program (Slavin, Madden, Dolan, Wasik, Ross, & Smith, 1994) in a sample of 27 schools in which significant numbers of students had special learning needs. The project aimed to replicate the work of Robert Slavin and the literacy gains achieved through the implementation of a comprehensive and integrated approach to literacy with an emphasis on prevention and intensive intervention. The project ensured that each of the 27 trial schools had the following elements in place:

Early Intervention — all trial schools were to provide Reading Recovery, an intensive intervention program for students experiencing difficulty in literacy acquisition in Year One.

Structured Teaching Programs — work was undertaken to assist teachers in developing high quality, structured teaching programs designed to address individual student's learning needs.

Regular Monitoring and Assessment — all students were subject to regular monitoring of their progress with student assessment data used to inform the development of teaching and learning programs.

Home/School Programs — trial schools were encouraged to develop strategies and programs to maximize the home school partnership.

Pre-school Programs — it was proposed to study the pre-school experiences of students in trial schools with the intention of establishing more effective literacy programs in these settings and closer liaisons between pre-schools and primary schools.

Professional Development — teachers from trial schools were involved in an intensive professional development program with an emphasis on developing effective teaching programs and classroom organization and management to support focused teaching. Throughout this program teachers considered the importance of building effective "learning teams" in their schools and the benefits and practices associated with collegiate support and collaboration as changes to literacy teaching were introduced.

School-Based Coordinators — early literacy coordinators were appointed in each of the trial schools. The coordinator was to support the implementation of the Project at the school level in conjunction with the school's leadership team, to provide assistance and professional development for classroom teachers, and to coordinate data collection for the Project.

While many of the elements described existed to varying degrees within the trial schools, the Project was designed to ensure "that all elements are present, working effectively and in alignment with one another." (Crévola & Hill, 1997, p. 5).

The ELRP involved teachers in a process of significant reform, re-conceptualizing both curriculum content and classroom organization for teaching and learning as they worked to implement a program to maximize the literacy achievements of "at-risk" students in the early years of schooling.

The Triple I Model

To examine the process of change in ELRP schools systematically, the Triple I Model developed by Matthew Miles (1987) was used. This model, outlined in Table 1, maps and guides the process of change through the identification of key stages and factors associated with successful implementation, providing a framework for analyzing and understanding the flow and nature of change. It describes a system of variables associated with successful reform initiatives.

The study also aimed to evaluate the Triple I Model and assess its relevance as a means of interpreting and monitoring change in schools. An examination of the change factors and their impact on school teams as they implemented improved teaching and learning strategies, was undertaken. Central to the study was the focus question:

> How useful are the stages and factors identified by the Triple I Model in explaining the change process in ELRP schools and what variations to the model are suggested to accurately reflect the process of change?

Table 1. The Triple I Model

Triple I Model

Initiation Factors
- Linked to High Profile Need
- Clear Model
- Strong Advocacy
- Active Initiation

Implementation Factors
- Orchestration
- Shared Control
- Pressure and Support
- Technical Assistance
- Rewards

Institutionalization Factors
- Embedding
- Links to Instruction
- Widespread Use
- Removal of Competing Priorities
- Continuing Assistance

Note. From Practical Guidelines from School Administrators: How to Get There by M. Miles, 1987.

Method

The research project was completed as a case study, describing and interpreting the process of change undertaken by 23 of the 27 schools involved in the ELRP during the first 12 months of the project. Five sites were selected from the original sample of 23 schools for the collection of additional data in order to gain further insight into how schools worked to implement change. It was intended that these focus schools further illustrate and expand on trends within the larger population, as suggested by Burns (1994):

> The case study is the preferred strategy when "how," "why," or "what" questions are being asked... or when the focus is on a contemporary phenomenon within a real life context. In brief, the case study allows an investigation to retain the holistic, meaningful characteristics of real life events. (p. 313)

Details of the process of change in schools were acquired through the use of observations, discussions, document analysis, interviews, and questionnaires that were collected and analyzed at ten-week intervals. The data collection methods were selected to ensure that the "teacher voice" was heard throughout the process of change and provided an effective means of obtaining information in relation to the tasks performed by coordinators and school teams as changes were introduced. Coordinators and teachers provided vivid descriptions, nested in context, to provide an authentic account of the process of change undertaken by teachers and schools involved in the ELRP.

To use the Triple I Model to monitor closely the process of change, the factors from the change model were defined and contextualized to relate specifically to the ELRP (see appendix). Data collected were then categorized using these descriptions with charts compiled to present evidence of the range of activities attended to by school teams as they worked to introduce the required changes. Analysis of the data at ten-week intervals, coinciding with school terms, facilitated in determining the impact of tasks undertaken in supporting the introduction of improved teaching and learning strategies in ELRP schools throughout the school year.

Results: Change Factors Significant to ELRP Schools

The data collected from schools indicated the significance of particular factors as schools worked to reform their classroom literacy practice. Information from the study suggested that specific factors, and others in combination, were critical to the implementation of change in ELRP schools. In presenting the results of the study it is our intention to discuss, in first instance, change factors significant to ELRP schools and then to consider data that suggest variation to the change model to reflect accurately the process of change undertaken in these schools.

Change factors that were found to be particularly relevant as school teams worked to improve their literacy practices were: *Clear Model, Orchestration, Pressure and Support, Technical Assistance, Shared Control/Rewards, and Removal of Competing Priorities.*

The following definitions of these change factors and data charts illustrate how the factors identified by the change model contributed to the process of change. Explanations and examples from the data collected follow each definition.

Clear Model

Clear Model	*Evidence*
The learning team members understand the content of the teaching and learning program to be implemented, and the processes involved with a learning teams model of professional development adopted.	• ELRP information sessions • ELRP professional development - Coordinator training - School team sessions • Project Coordinator school visits • School learning teams established

During the initiation stage of the ELRP, school teams were presented with a design that indicated the elements to be introduced to schools as a means of improving the literacy learning outcomes of their students. Of particular interest to this study were the aspects of the design that established support structures for teachers and the process that would be employed as teachers made changes to their classroom programs.

The ELRP required that schools appoint non-teaching coordinators to support the Project and to assist the change process at an individual school level. The study indicated that coordinators played a vital role in relation to school-based leadership and in the provision of learning opportunities and support for their teams.

Prior to commencing the Project, teachers were introduced to the notion of "learning teams." School teams were to work and learn together as they introduced the changes required. The difficulties and frustrations associated with the introduction of changes of this magnitude were discussed with collective learning and collaboration proposed as important means of successfully implementing curriculum reform. The data collected in this study indicated a strong connection between schools that were able to successfully use this collaborative model and those that effectively implemented changes to their early years literacy programs. The following quote from a school coordinator is indicative of the importance given to collective action and collegiate learning and support.

> *"I believe the team is functioning extremely well. We work together, we share resources and we pitch in whenever someone else is down. Our weekly meetings provide plenty of opportunity for concerns to be discussed and thoughts and ideas to be shared. The team finds this a useful avenue to learn from others and reflect on their own teaching."*

Orchestration

Orchestration	*Evidence*
School teams develop strategic plans for the Project's introduction while ensuring the provision of texts, classroom materials, and time as required to implement fully the testing and classroom program.	• Preparing testing materials • Testing • Organizing time release for testing • Collating data • Filing • Text ordering, levelling, Organizing, preparing guided reading activities, organizing learning centre activities, preparing task management boards • Team meeting agendas • Timetable organization • Training parent helpers • Organizing teacher aides • Budget and expenditure records

To facilitate the Project's implementation at the school level, coordinators planned for the introduction of changes to teachers' classroom programs. Coordinators were responsible for ensuring that the

rate of change was manageable and that teaching approaches introduced could be sustained.

"All teachers seem to be moving into guided reading sessions... building a firm foundation by establishing the task, setting up expectations, and explaining what works and doesn't in terms of activities and general organization seems to be the major objective at present."

"I encouraged teachers not to rush into implementing guided reading sessions but rather ensure routines are established within classrooms and all children know where all equipment is stored and how to use it so that the children are independent workers."

The importance of resource provision was highlighted by the experiences of ELRP schools. Material and human/time resource needs frequently change as curriculum reforms are implemented. This factor could not be overlooked or underestimated in relation to its importance in this instance. To facilitate small group teaching, schools now needed multiple copies of graded texts as well a range of activities students could complete independently. The role of the coordinator in relation to the orchestration of the Project ensured that many of the resources required by classroom teachers were provided. This form of support was acknowledged by coordinators and valued and appreciated by teachers who recognized its importance. This is illustrated by the following quotes:

"In my role as change agent I must make it as easy as possible for teachers to change their teaching style comfortably. One way of doing this is to provide teachers with materials to support the program's implementation in their rooms."

"The coordinator has been supportive. She has endeavored to provide us with all the relevant materials and shared outcomes from her PD days. She has ensured that our reading materials have been levelled, organized visits to other schools and assisted in the preparation of activities."

Coordinators were also able to support their learning teams through the provision of additional release time. This time was used in a variety of ways, such as: (a) for adequate preparation of new teaching materials; (b) for assistance with data collection and ongoing monitoring of students' performance; (c) to afford opportunities for teachers to work together during class time; (d) to allow time for professional reading; and (e) for teachers to undertake classroom organization and planning. Because of the many demands of the Project, the support provided through time release was regarded by many as essential and seen as practical assistance both for and by the teachers involved.

Pressure and Support

Pressure and Support	*Evidence*
The teams respond to the Project demands, while taking collective responsibility for the implementation of the Project, using a range of collaborative learning opportunities as appropriate.	• Pre-Test results • Workload issues • Teachers feeling threatened, ineffective • Constant demands of the Project • Support for testing program

	◦ Class release time - testing ◦ Team working bees ◦ Team planning ◦ Team sharing - ideas, resources ◦ Team discussions, problem solving ◦ Supporting each other ◦ Visits to other classrooms ◦ Peer modeling ◦ Coordinator support - Assisting in classrooms - Testing for text levels - Providing teacher release time

There were many occasions throughout the implementation of the Project when teachers were feeling both overwhelmed and frustrated.

"The negative 'can't do' feelings keep reappearing."

"Some resent new work imposed and are finding it really difficult to deal with. Self-image, risk-taking and willingness to change are real concerns for some."

"Many negatives regarding the expectations of the program need to be dealt with."

The Project placed many teachers under a great deal of pressure. The uncertainties of the Project, the challenges it presented, and the enormity of the task were, under "normal" circumstances, conditions that may have lead to teachers withdrawing from the Project or paying "lip service" to it without working through the changes to transform their literacy programs effectively and significantly. Acknowledging that people need pressure to change, the expectations and structure of this Project left teachers with little option but to continue.

By agreeing to participate in the ELRP, schools had entered into a cooperative agreement with the Department of Education (Victoria) and The University of Melbourne, and with this came a degree of commitment and accountability to the Project's implementation. There was a high level of funding for the ELRP from a system level, especially in relation to the provision of salaries and grants for professional development with schools making a three-year commitment to the Project. Linked to this was the high profile of the ELRP and the widespread attention it received. As ambassadors for the Project, there was pressure on school teams to demonstrate the preferred approaches to literacy teaching and learning.

There was also pressure from the Project Coordinator and the school-level coordinator to introduce changes to teaching programs. Student data collected on a regular basis both monitored students' performance and reflected the degree to which teachers were effectively using approaches described.

While there was external pressure placed on teachers to persist with the ELRP, in many schools the low standard of students' pre-test results forced teachers to reassess their literacy teaching practices and explore the program alternatives presented by the Project Coordinator. Teacher concern regarding students' low literacy levels are typified by this coordinator's comment:

"Team members are concerned by the low results of many children. Those who taught in the area last year feel disappointed."

The degree of discomfort created by the feedback of students' results challenged teachers to confront the problems of students' literacy levels actively and contributed to sustaining teachers' efforts throughout the change process.

At the school level there was also the pressure placed on individual teachers from others within the teaching teams. While the nature and function of ELRP teams was primarily supportive, they also at times provided a degree of peer pressure that contributed to team members working to implement the changes described.

"It might not sound so good, but we have a couple of teachers who like to brag about what they are doing — this motivates other staff members to get their act together."

These pressures were, however, balanced by the support structures developed to help teachers as they continued with the Project. Support in the context of the ELRP was multifaceted, the culmination of a range of factors from within the change process, each contributing to assist teachers.

The intention of the ELRP Project Coordinator was to utilize the synergy of teaching teams as changes were implemented; however, in some schools time and effort were required before the team worked together as a collective unit. It would be misleading and an oversimplification of the complexity of interpersonal relationships to suggest that effective team processes were readily established in all ELRP schools. The following quotes from coordinators' journals describe the difficulties associated with establishing effective learning teams.

"Have to work hard to keep the team together, all are very experienced teachers and want to do it their way."

"Other teams seem to have developed a real cohesiveness and we don't, I wonder why?"

"We really need to focus on how we can best work together and how all individual needs are best met by doing this. It's more than just lip service though, and may need personal giving beyond our comfort zone."

Time was required for new teams to develop professional working relationships. When introducing collaborative work practices, teachers needed time to develop the necessary trust and professional respect to seek support and to feel confident that the sharing of materials, activities, and ideas would be reciprocated. For some, there was also the need to break down an existing culture of teacher individualism and isolation and to establish collaborative working relationships. Teachers needed to move to the point where they recognized that changes of the magnitude associated with the ELRP required collective effort.

Teams that were most successful in implementing change to their classroom programs appeared to recognize intrinsically the importance of working together. Peer support and learning were achieved as teams talked through implementation issues, discussed ideas, solved problems together, developed and shared resources, and collaboratively planned teaching programs.

"The team is committed to making this work and are sharing well to support one another."

"Team meeting very good, talked through problems and possible solutions which are workable in classroom situation. Found they assisted each other with problem solving."
"There was a lot involved in getting the program organized, so the team needed to do as much sharing as they possibly could to actually lessen the workload. The team placed an emphasis on sharing themselves, sharing what they have and what they have done."

The ELRP experience emphasized the critical balance between pressure and support as changes were implemented. The Project highlighted the importance of both accountability and commitment throughout the change process and the need for ongoing support in a range of forms. In this way the ELRP was effective in creating for participants a degree of "personal productive challenge" (Baird, 1992). The Project combined "cognitive demand" and "affective interest" components, with early literacy issues confronting teachers and their interest in the Project motivating and supporting them as they responded to the challenge of improving student literacy levels in their schools.

Analysis of the data collected from ELRP schools indicated that peer and coordinator support in a range of forms effectively combined to assist teachers as they transformed their literacy teaching practices. The change factor *Technical Assistance* was also characterized as providing practical support and guidance for teachers as they altered their classroom programs to meet the demands of the Project.

Technical Assistance

Technical Assistance	*Evidence*
The coordinator and learning team members develop effective ways of working and learning together and use the knowledge and skills developed in the externally provided professional development.	• ELRP professional development sessions • Project Coordinator school visits • Coordinator sessions with team • Distribution of professional readings • Assistance for team members with - Testing procedures - Running record analysis - Guided reading - Text selection - Students grouping - Learning centre activities • Visiting classrooms • Providing feedback for teachers • Modeling teaching approaches • Having informal discussions • Releasing teachers to observe each other • Providing organization for school visits • Training, assisting replacement teachers

As changes to classroom programs were introduced, teachers also needed to enhance their skill levels. Much of this was achieved as teachers worked and learned together, however both the Project Coordinator and school coordinators were charged with responsibility for increasing the competencies of teachers to enable them to implement the program effectively and confidently. The data collected indicated that *Technical Assistance* was seen as a critical support factor. In essence, this factor related to the professional learning opportunities provided by the Project Coordinator and school coordinators as they worked with learning teams to further develop teachers' skills.

School coordinators and teams found the ELRP outsider-provided professional development sessions extremely valuable. It was at these sessions that teachers were introduced to the approaches to be adopted, and provided with opportunities to clarify their ideas, share and discuss their concerns, and confirm their understandings.

The professional learning that occurred when the Project Coordinator was able to visit individual school sites and work with the teaching teams was considered to be extremely valuable. These visits were in many cases a catalyst for continued change, as teams were led to assess their current practices critically and to set achievable goals for ongoing improvement.

"Being able to work with (Project Coordinator) in our own school setting has given us insights, new directions, assistance with individual concerns and affirmation of many aspects of our program."

"The team commented on how much they had been able to get out of the day... They all felt the afternoon session was of great benefit as everything related to (school name)."

Schools that successfully introduced changes to their classroom programs were those where the coordinator actively supported the learning of the team and fully embraced the role of "lead learner." Coordinators at these schools acknowledged their own learning needs and created opportunities to support the learning of their teams on a day-to-day basis. Discussions were used productively, prompting teachers to think about their programs and further teacher learning. The coordinators often modeled teaching approaches and acted as coach and mentor to support teachers as new ways of working with students were introduced. The following quotes are illustrative of how coordinators were able to support the learning of their teaching teams:

"My coordinator's role is keeping me in daily contact with all junior school teachers... with these exchanges the teams are becoming more reflective of their practice."

"I have found going into classrooms a great opportunity to speak to individual teachers about their program. This enables me to 'tune in' to those who may need additional assistance."

Shared Control/Rewards

Shared Control	*Evidence*
Teachers use the Project to achieve improved student learning outcomes and to make decisions, negotiating together within the "givens" of the Project.	• Team working to achieve common goals • Teachers making decisions regarding implementation of the Project • Positive feelings for the Project • Planning and organizing for next year

Rewards	*Evidence*
There is acknowledgment of the positive impact of the Project on student learning outcomes, the school profile, and school improvement efforts.	• Improved student results • Enhanced teacher skills • Teachers' efforts acknowledged by principal • Parents' positive comments, enthusiasm • Improved school reputation

During the early stages of the ELRP, as schools collected their initial student data and began to make changes to classroom programs, many teams adopted the approaches described as a means of fulfilling their obligations and meeting the expectations of the Project. They had little control over the process and worked to meet set deadlines and requirements. This coincided with a time when many teachers were encountering difficulties and pressures related to the Project's implementation. In many instances the changes were seen as being imposed. It was not until there was clear evidence of students' improved literacy skills that a number of school teams accepted responsibility for the Project and its implementation. At this time teachers began to fully recognize the value of the program and its benefits for students, acknowledging their own role in the improvement efforts.

"Team is encouraged by results, tentative but quietly confident of program."

"Class teachers are seeing improvement in individual children and in their own teaching."

"Teachers are starting to get enormous feedback from children's success."

Teachers' commitment to the Project developed as they became increasingly aware of the difference they were making in student learning. The notion of change in teachers' beliefs and attitudes following changes to teachers' classroom practice and student learning outcomes has been explored by Thomas Guskey (1986) and relates to his Model of the Process of Teacher Change:

> According to the model, when teachers see that a new program or innovation enhances the learning outcomes of students in their classes; when for example they see their students attaining higher levels of achievement, becoming more involved in instruction, or expressing greater confidence in themselves or their ability to learn, then, and perhaps only then, is significant change in their beliefs and attitudes likely to occur. (p. 7)

The experience of teachers involved in the ELRP has also further demonstrated the significance of Glasser's Control Theory (1987) and the importance of needs-satisfying work in motivating and encouraging teachers to develop quality teaching programs. The Project was seen as effectively meeting teachers' needs in relation to "achievement, influence, and affiliation" (Johnson, 1990, p. 3). While early test results challenged teachers to improve their literacy teaching and learning programs, participation in the ELRP enabled teachers to experience success as enhanced literacy learning outcomes were achieved. The Project also empowered teachers to make explicit their teaching purposes and enabled them to

articulate their teaching decisions clearly and, hence, exert greater control over their professional working lives.

The processes established by the ELRP created opportunities for teachers to work together and establish supportive relationships, often resulting in increased personal and professional caring amongst school teams. Huberman and Miles (as cited in Fullan, 1991) have also acknowledged the importance of teachers experiencing success and personal mastery: "When changes involve a sense of mastery, excitement and accomplishment the incentives for trying new practices are powerful" (p. 129).

As learning teams became more familiar and confident with the classroom teaching program and acknowledged its benefits in relation to student learning outcomes, they were then able to use and adapt the strategies to meet students' specific needs. They identified particular areas of strength and need and commenced to tailor the Project to meet the requirements of specific school contexts. This became evident when towards the end of the first year, teams commenced to plan actively for the next year. School teams clearly recognized the potential of the program and began to explore ways this could be best implemented in their own settings. ELRP teams began to move from a "fidelity" model of implementation to a "mutual adaptation" model (Fullan and Pomfret, 1977), the consequence of this being greater control and ownership of the Project's implementation. This was reflected in comments from coordinators' journals as teachers planned for the second year of the Project:

> *"Lots of forward looking positive discussion... excited by plans for next year, what they would like to try, what's going to be negotiable/non-negotiable... Team discussions in the car coming home really useful in helping me see that those present have a real ELRP commitment and can see the possibilities."*

> *"As tired as they are, teachers are already planning for next year — oral language, improved learning centres, etc."*

Removal of Competing Priorities

Removal of Competing Priorities	*Evidence*
There was an allocation of a daily two-hour teaching block for literacy teaching, with an emphasis being given to literacy and numeracy in early years classrooms.	• Reorganization of timetables • Increase in literacy teaching time • Working with specialist teaching staff to overcome issues associated with the "overcrowded curriculum"

The importance of creating space within the curriculum and time within teachers' programs to explore and experiment with the new approaches to be introduced was critical to the successful implementation of the Project. While it is acknowledged that the *Removal of Competing Priorities* is the means of creating opportunities for teachers to focus on changing classroom practice, it has also been interpreted as the process whereby teachers themselves eliminate competing approaches and demands from their classroom programs.

For the ELRP to have an impact on students' learning outcomes, schools had first to allocate priority learning time to literacy. Teachers were aware that literacy acquisition was to be emphasized in their early years classrooms while other school and system curriculum initiatives were seen as having a lower priority.

At an individual classroom level, teachers were encouraged and supported to adapt or shed many of their existing literacy teaching practices and to adopt the approaches advocated by the Project Cooordinator.

When endeavoring to introduce changes of the extent and scope of those described in this study, it was found that the demands on teachers needed to be prioritized, both in relation to face-to-face teaching time and teacher preparation time. If other initiatives are not removed, their importance and emphasis needs to be reconsidered or linked into the major reform agenda. The ELRP enabled schools to use a singular initiative to achieve a range of outcomes. Schools' used the ELRP as a vehicle to address local curriculum priorities, teacher professional development planning, and performance review procedures. Student data collected were used to report against state curriculum standards, while also informing school and student reports with links to systemic school reviews.

Schools are frequently confronted with an overload of reform agendas, each vying for the attention of classroom teachers and often resulting in no reforms being implemented effectively to the stage where they begin to have a clear and positive impact on student learning. The ELRP experience highlighted the importance of prioritizing reform agendas for teachers and empowering them to focus their attention as they worked on a singular yet multi-dimensional and significant initiative.

Re-conceptualization of the Change Model

The Triple I Model accurately identified factors critical to the process of change in ELRP schools, with these being used to identify, clarify, and monitor the actions of learning teams throughout the change process. However, this study challenged the Triple I Model's temporal representation of the change process. Factors and stages within the change process were seen as overlapping and recursive as the Project was initiated, implemented, and institutionalized. In the context of this study, a number of the factors from different stages within the change model occurred at stages not indicated by the model and continued throughout the period of the study. Data from this study suggest that a more useful way of representing the process of change in schools may be to consider each of the stages as overlapping, with the change factors interacting across stages. In this way the dynamic nature of change in schools can be diagrammatically represented as in Figure 1.

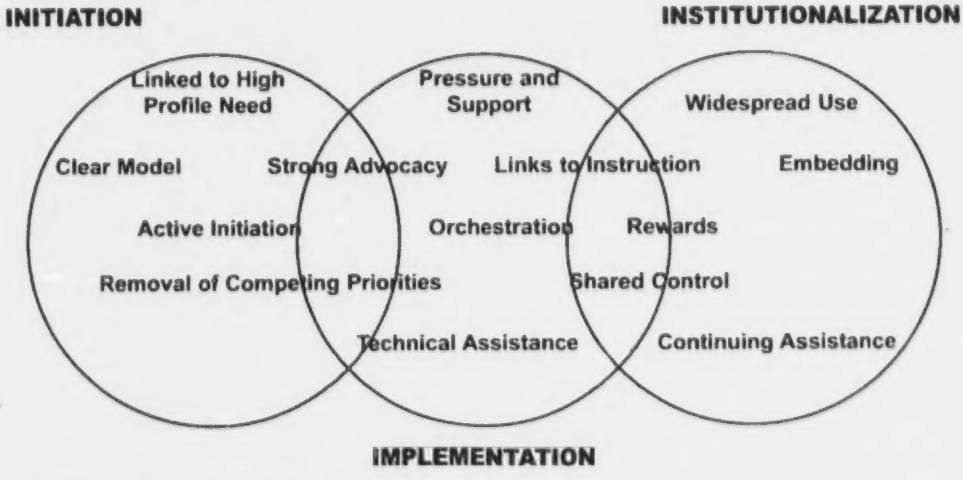

Figure 1. The Triple I Model (Revised)

The revised model reflects the impact of a number of the change factors at particular stages within the process of change. Factors associated with the initiation stage of the change process continued into the implementation phase and beyond, while factors described as supporting the institutionalization of the change process were seen as impacting on schools as changes were introduced. In particular, the data collected challenge the placement of the change factors *Removal of Competing Priorities, Strong Advocacy,* and *Links to Instruction.* The influence of these factors on the change process in ELRP schools, as well as the time of their impact are outlined below.

Removal of Competing Priorities

As discussed, *Removal of Competing Priorities* was a factor significant to ELRP schools, and within the context of this Project was seen as critical in supporting the initiation and implementation of new approaches to literacy teaching and learning. The creation of time and space within the curriculum enabled teachers to focus their energy and work towards the implementation of significant reform to their daily literacy teaching practice.

It is clear from this study that the practice of continually adding to teachers workloads needs to be addressed. Effective reform requires realistic expectations for teachers involved in the process of change. The conscious removal of competing priorities, both for teachers and by teachers themselves, needs to occur earlier rather that later within the change process.

Strong Advocacy

Strong Advocacy	*Evidence*
There is strong support for the Project from the school's leadership team, with the coordinator taking a leading role in supporting and promoting the Project.	• Staff reports • Meetings with school leadership team • School council reports • School displays • Parent information sessions • Newsletter articles • Local press reports • Regional/district presentations • School visits

In many instances, coordinators promoted the Project within their schools and were often personally responsible for the school's initial interest in the ELRP. Data collected from ELRP schools emphasized the importance of *Strong Advocacy*, notably during the initiation stage, but also continuing throughout the implementation stage of the change process and beyond.

The Project was actively promoted at a system and Project team level, with participating schools gaining a reputation as exemplary schools providing quality early literacy programs. School coordinators also played a major role in advocating the program at the school level, highlighting the importance of the Project as a means of providing a focus for the schools' ongoing improvement efforts.

Coordinators were able to ensure that the ELRP remained high on the agenda in their own schools, with the efforts of their learning teams acknowledged and applauded in a range of forums.

"A great deal of my time is spent discussing, reporting... and promoting the ELRP with parents. The overall profile of the school has been greatly enhanced."

The active promotion of the program and the profile it gained contributed to teachers' persistence throughout the implementation stage of the change process, strengthening their commitment to ongoing reform.

Links to Instruction

Links to Instruction	*Evidence*
The degree to which the elements of the structured literacy program were seen as integral to the classroom teaching and learning program	• Students matched to text • Two to three guided reading sessions a day • Reorganisation of classroom furniture • Establishing learning centres • Use of task management boards

In this study, *Links to Instruction* was defined as representing the observable changes to classroom programs. Data collected throughout the study indicate this is a critical factor not only in the institutionalization stage but also during the implementation stage of the change process, providing tangible evidence of changes to teaching programs. Changes to classroom programs, the *Links to Instruction*, were not seen as the end product of the change process, but rather reflected the changes being adopted by teachers. From the time teachers began to use the new approaches on a regular basis, the changes were seen as being linked to the instructional program of the classroom. This is consistent with notions of change in schools being an ongoing, gradual process with teachers changing their practice and adjusting their programs over time. Changes to teachers' classroom practice were reported throughout the implementation stage of the change process:

"All five teachers have noted the reading of children resulting from matching children to text, regularly listening to them read and ensuring children have books introduced to them before reading."

"With all the uncertainties I still feel excited about the Project and it is terrific to see the classroom organization in terms of guided reading, etc., running more smoothly. The teachers seem to be enjoying the new organization and their enhanced understanding of the reading process."

Successful Change Processes and Student Learning Outcomes

Effective change processes in schools are a means to an end. The success of school improvement efforts can only be measured in relation to their impact on student learning. While data collected from ELRP schools for this study indicate that schools were able to implement changes to their early years classroom literacy programs effectively, it should be noted that ELRP researchers have evidence that "clearly indicates that the classroom program has impacted dramatically upon student learning" (Crévola & Hill, 1997, p. 22).

Conclusion

This study of change in schools has informed a re-conceptualization of Miles' Triple I Model. This revised model is seen as a frame that may contribute to explaining the process of change in schools and may assist in the planning of effective change projects. It also challenges schools to rethink the conditions of work for key people responsible for the implementation of change projects, empowering them to lead change and teacher learning in schools effectively.

As schools prepare students to live and work in an increasingly dynamic society, they become involved in an ongoing process of change and continuous school improvement. Those with a genuine interest in initiating reform agendas to support student learning could do well to acknowledge the experience of ELRP schools. The results of this project serve to urge schools to consider the introduction of authentic improvement projects, to set priorities, and to resource reform efforts effectively, further challenging school leadership teams to think strategically as they plan and monitor the process of change in their schools.

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Biographical Information

Janet Scull trained as a Reading Recovery Trainer during 1998 in Auckland, New Zealand. She currently works with Reading Recovery Tutors, Tutors in training and teachers to support the implementation of Reading Recovery in Victoria, Australia. As a member of the Early and Middle Years of Schooling Branch since 1995, Janet has been involved in the development of the Victorian Early Years Literacy Program, contributing to Teaching Readers, Teaching Writers and Teaching Speakers and Listeners. She now plays a significant role in the professional development of Early Years Trainers in Victoria.

Neville Johnson is a senior fellow in the Department of Learning and Educational Development, Faculty of Education, University of Melbourne and is the director of Connections Educational Consultancy. He entered teacher education after many years experience as a teacher and later as an educational researcher.

Dr. Johnson has lectured in teacher education institutions in Australia, Great Britain, the United States, and Canada in areas such as: curriculum leadership, development and evaluation; teacher professional development; and teaching and learning strategies. In addition, he has worked extensively as a researcher and consultant throughout Australia, and as a visiting scholar in the United States, Canada, and the United Kingdom. He is the author of several books and many articles and chapters in educational publications, more recently writing about strategies to support teacher and school change, schools as learning communities, professional approaches to staff appraisal, and effective staff professional development

His current research includes long-term studies of schools as learning communities and investigation of staff teams in school settings. The concept of staff teams as professional action-learning teams has resulted.

Appendix 1

Triple I Model Factors: Contextualised to Relate to ELRP

Initiation Factors	Low	Medium	High	Very High
Linked to High Profile Need Involves the extent to which early literacy is considered a priority by the school, with students' low literacy levels being acknowledged. Includes evidence of school documentation and activities to improve student literacy outcomes.	Literacy not considered a school priority.	Literacy identified as a school priority.	Literacy is School Charter priority and supported throughout school with additional resources.	Literacy is a Charter Priority with staff working to achieve established goals and to improve student literacy outcomes in the early years of schooling. There are programs fully supported by professional development and a high level of resourcing.
Clear Model Involves the extent to which the learning team understands the CONTENT of the learning and teaching program to be implemented, and the PROCESSES involved with a 'learning team' model of professional development.	Individual teachers have a basic understanding of the content, and there is little team work during implementation	Each teacher works with learning team coordinators to increase their understanding of the content and implement changes.	Coordinator and team members work collectively to understand the changes described during professional development sessions, and use some collaborative processes to implement the Project.	The total learning team support each other so that each team member attains a high level of understanding of the content and systematically uses collaborative processes to implement the Project.
Strong Advocacy Involves the extent to which the school leadership team and coordinator take a leading role in supporting and promoting the Project.	Limited support for Project.	Coordinator informing staff and school community of ELRP.	Coordinator and school leadership team actively promoting Project in school community.	Broad based support for the ELRP with coordinator and school leadership team active in promoting both the school and the Project.
Active Initiation Involves the extent to which the ELRP expression of interest was supported by all members of the school community. And commitment to the Project was demonstrated, especially from those actively involved in its implementation.	School community not consulted regarding ELRP involvement.	School community informed of Project with implications discussed after the application was accepted.	School community discuss details of the Project and support the school's involvement in the program.	School community agree to participate in program, with the school active in preparing for the introduction of the Project.

Implementation Factors	Low	Medium	High	Very High
Orchestration Involves the extent to which the learning teams develop strategic plans for the Project's introduction, while ensuring the provision of texts, classroom materials and time as required to fully implement the testing and classroom program.	Coordinator involved in testing program and data collection as required by Project.	Coordinator manages the Project and oversees classroom resources.	Coordinator plans for the implementation of the classroom program and provides resources, materials, and time as required by teachers.	School team and coordinator plan for program implementation and work towards resourcing the program to a high level, anticipating needs and ensuring all materials are available.
Shared Control Involves the extent to which the team USE the Project for improved student literacy learning, and make decisions/ negotiate within the "givens" of the Project.	Project is imposed and the team are unwilling recipients of change. The tendency is to "do" the Project.	Teachers see themselves as responsible for meeting program requirements at the classroom level. The tendency is to "do" the Project, but there is a degree of team ownership.	The learning team sees the Project as assisting them in meeting learning needs of students and school goals. The tendency is to "use" the Project. It becomes the team's Project, and there is some negotiation within the "givens" of the Project.	The team accept collective responsibility for shaping and "using" the Project as they redefine and reinvent programs to meet school goals, and to suit the school context. Each team member is valued for his or her contribution, with all members working together to ensure success for the Project.
Pressure and Support Involves the extent to which the team responds to the Project's demands, takes collective responsibility for implementation of the Project, and uses a range of collaborative learning opportunities as appropriate.	Teachers work alone in implementing classroom programs and responding to Project demands.	Coordinator supports individual teachers in meeting Project expectations, with ELRP team meetings seen as a forum for discussion and sharing.	Team discusses expectations/issues in a range of forums, sharing materials and encouraging and supporting each other as the program is implemented by each teacher.	Team works closely together to meet Project demands and they support and challenge each other as they plan learning activities, share materials, and problem-solve. The team takes collective responsibility for classroom implementation.
Technical Assistance Involves the extent to which the coordinator and learning team members develop effective ways of working together, and use the knowledge and skills developed in the externally provided professional development.	Coordinator makes the minimal organizational arrangements to support team members. Externally provided and work-based learning support are mostly seen as separate.	Coordinator discusses concerns with teachers as problems arise, and supports team members when requested. Externally provided and work-based learning support are mostly seen as related.	Coordinators work with teachers to further develop knowledge and skills addressed in the externally provided professional development. Coordinator assumes a mentoring role. Externally provided and work-based learning support are often seen as integrated.	Coordinator seen as a lead learner and peer coach, modelling strategies and providing opportunities for team members to observe each other and learn together. Externally provided and work-based learning support are effectively integrated and combined.
Rewards Involves the extent to which the Project's positive impact on student learning outcomes and ongoing school improvement efforts are acknowledged.	Teachers see limited advantage in the Project.	Teachers see success of the Project as reflected in students' results.	Teachers see the Project as impacting positively on student learning outcomes and enhancing teacher collaboration.	School community appreciates team's efforts and commitment and openly acknowledge and affirm teachers. They see program benefits as impacting positively upon students' learning, enhancing culture of collaboration and ongoing learning, and raising school profile.

Institutionalization Factors	Low	Medium	High	Very High
Embedding Involves the extent to which school organization, documentation, and resourcing are designed to sustain the changes introduced with the Project linked to other facets of school organization.	Changes are restricted to classroom experimentation.	Classroom program implementation is supported by school organizational structures.	Classroom program is supported by school organization, with details of program currently being documented for further development and reference.	School organization is fully supportive of the Project, with the ELRP reflected in school policy and programs and the Project being linked to other school improvement/Department of Education initiatives.
Links to Instruction Involves the extent to which elements of the structured literacy program were seen as integral to the classroom teaching and learning program.	Strategies are not used as part of classroom literacy program.	Strategies are used as part of classroom literacy program.	Strategies are used regularly and seen as contributing components of classroom literacy program.	Classroom program is fully implemented, with students involved in strategies on a daily basis. Strategies are seen as central to classroom literacy program.
Widespread Use Involves the extent to which the ELRP impacted on the whole school literacy teaching program, with adaptations of the teaching strategies introduced across the school.	Program strategies remain with Project team.	Other members of school community are interested in program developments and implications for their own teaching practice.	Strategies and team processes are used by other members of school community to support students' literacy learning.	There is whole school commitment to literacy strategies and team processes as modelled by ELRP teachers.
Removal of Competing Priorities Involves the extent to which priority is given to literacy teaching and learning with the allocation of a daily two-hour literacy teaching block.	ELRP is seen as an addition to existing classroom program.	Classroom program is seen as meeting student learning needs in relation to English with other Key Learning Areas continuing to be emphasized.	Two-hour literacy block is established, with teachers being encouraged to adopt ELRP classroom program strategies.	Priority teaching and learning time given to literacy in early years classrooms, with emphasis on approaches and strategies as defined by the Project.

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READING RECOVERY® COUNCIL OF NORTH AMERICA

Children's Achievement and Personal and Social Development in a First-Year Reading Recovery Program with Teachers in Training

Lorene C. Quay, Georgia State University
Donald C. Steele, Georgia State University
Clifford I. Johnson, Georgia State University
William Hortman, Muscogee County School District

Abstract

This paper presents the results of one school district's evaluation of its first year's implementation of Reading Recovery, where the teachers were being trained while they instructed the at-risk children in this early literacy intervention program. At the beginning of the school year, the group of Reading Recovery children and a control group were equivalent on gender, ethnicity, and achievement. At the end of the school year, multivariate and univariate analyses of variance indicated that the Reading Recovery children were significantly superior to the control group children on: (a) the *Iowa Test of Basic Skills* Language Tests; (b) the *Gates-MacGinitie Reading Test*; (c) the six tests of *An Observation Survey of Early Literacy Achievement*; (d) classroom teachers' assessments of achievement in mathematics, oral communication, reading comprehension, and written expression; (e) classroom teachers' ratings of personal and social growth in work habits, following directions, self-confidence, social interaction with adults, and social interaction with peers; and (f) promotion rates.

Introduction

Reading Recovery is an intensive one-to-one intervention program for first graders who are at risk of failing to learn to read. New Zealand educator Marie Clay (1993b) designed the program in New Zealand and introduced it to the United States at The Ohio State University, which became the American leader in Reading Recovery training and research (Pinnell, DeFord, & Lyons, 1988). Ohio State established the program in six public schools in Columbus, Ohio in 1984, and since that time programs have proliferated throughout the United States. Ohio State trains university faculty members from all areas of the country to implement Reading Recovery training programs at their own universities. In turn, these faculty members train teachers who are sponsored by the school systems in which they teach.

These teachers become participants in a yearlong program that focuses on helping them develop both theoretical understandings of the reading process and practical applications for teaching at-risk children. At the end of the year, they return to their school systems as "teacher leaders" and train and supervise classroom or specialist teachers who are selected from their schools to become Reading Recovery teachers. Typically, the Reading Recovery teacher tutors in the program for one half of the day and spends the other half of the day teaching in the regular classroom or in small group instruction.

Research on Reading Recovery

Program Effectiveness on Children's Achievement

Both the merits and the drawbacks of Reading Recovery programs and evaluations have been described in many published articles and unpublished technical reports. For example, Shanahan and Barr (1995) published an extensive review in which they "...tried to offer a thorough, systematic analysis of all available empirical work on Reading Recovery" (p. 961). They discovered more than 100 journal articles and professional presentations. After an in-depth analysis of five different comparisons of pre- and post-tests of Reading Recovery children, they concluded, "...it appears that the average Reading Recovery child who successfully completes the program makes dramatic progress during first grade" (p. 966). First-grade retentions also appear to decline after schools implement Reading Recovery (Dyer, 1992; Lyons & Beaver, 1995).

Shanahan and Barr (1995) "...found no studies of Reading Recovery that did not suffer from serious methodological flaws" (p.961). They noted that "...the most basic requirement of any instruc-

tional program is that it result in learning; not necessarily more learning than would be accomplished by other approaches, but more than would be expected if the intervention did not take place at all" (p. 965). After Shanahan's and Barr's comments, Lyons (1998) provided replication methodology to demonstrate that children who received Reading Recovery instruction from identically trained teachers using the same teaching procedures in very diverse populations achieved remarkably similar gains.

However, the gains achieved by Reading Recovery children could be a result, not of the program, but of any number of factors, including maturation, instruction in the first-grade classroom, and other school-related experiences. One of the most valid ways to determine that the program, and not some other factor or factors, is the cause of gains in reading achievement is to compare Reading Recovery children to a control group of equivalently at-risk children who do not have the Reading Recovery treatment. The majority of Reading Recovery studies are open to criticism because they do not use an experimental method involving a control group. However, the few studies that did so (e.g., Huck & Pinnell, 1986; Iversen & Tunmer, 1993; Pinnell, Huck, & DeFord, 1986; Pinnell, Lyons, DeFord, Bryk, & Seltzer; 1994) produced consistent results indicating that the Reading Recovery children were superior to the control group children on post-test measures of reading achievement.

Teachers' Level of Experience and Knowledge

The controlled evaluations mentioned above were conducted in mature Reading Recovery settings where the Reading Recovery program had been in operation for some time prior to the evaluation. The Reading Recovery children in these evaluations were taught by experienced, highly skilled teachers. This was one basis of Rasinski's (1995) criticism of the Pinnell et al. (1994) study that found greater gains for Reading Recovery children on several post-test reading measures than for children in other remedial programs, including control children. Rasinski's major criticism was that the Reading Recovery teachers had a higher level of training than the teachers of the other remedial groups and the control group.

Hiebert (1994) indirectly assessed the relationship between Reading Recovery teachers' experience and Reading Recovery children's gains. To do this, she summarized data sent annually to Ohio State from "...three sites where teacher leaders have been trained for the most extended period of time" (p. 18) and from the National Diffusion Network Executive Summary, which reports data for all North

American Reading Recovery sites. The three seasoned sites were The Ohio State University, the University of Illinois, and Texas Woman's University. Although Hiebert concluded that "...a high percentage of Reading Recovery tutees can orally read at least a first-grade text at the end of Grade 1" (p. 21), she found a major source of variation in students' reading levels to be the first year versus subsequent years of Reading Recovery program implementation. During the first two years of implementation at Ohio State, students completing the Reading Recovery program attained a primer level; but during subsequent years, students attained a first to second grade text reading level. Hiebert concluded that "...once a program is in place, there appears to be considerable fidelity in the results" (p. 21). This finding suggests that Reading Recovery teachers' effectiveness is related to some level of Reading Recovery experience or program maturity.

In addition, Pinnell et al. (1994) indicate that a major emphasis of Reading Recovery involves the professional development of teachers. They define Reading Recovery as "...a systemic innovation that incorporates teacher development as a key element in achieving accelerated progress with at-risk children" (p. 10). Despite the focus on professional development, only one study of the effects of Reading Recovery training on teacher change was found. DeFord (1983) explored teacher change within a year's professional development course, and the results indicated teachers made significant changes in their orientation to reading, moving from a skills orientation toward a whole-language orientation. However, neither the extent to which this change influenced teacher effectiveness nor children's learning was studied. Given all of these questions regarding the level of teacher understandings and competence, research to investigate these relationships to student outcomes is in order.

Personal and Social Development

Although learning to read is likely to have far-reaching consequences for children, Reading Recovery research typically focuses on its effect on reading achievement and does not assess its influence on social and personal development. Only one study that compared Reading Recovery children to a control group on personal characteristics was found in the literature. Cohen, McDonell, and Osborn (1989), studying feelings of efficacy, found a trend indicating that Reading Recovery children feel more competent to do reading and writing activities than other at-risk children. In another study, where a control group was not included, students responded positively to a self-esteem questionnaire after receiving Reading Recovery instruction (Traynelis-Yurek

& Hansell, 1993). There is a need for direct observations of Reading Recovery children's personal and social behaviors.

Purpose of the Study

The purpose of the present study was to determine whether a group of children who participated at the very beginning of a Reading Recovery program implementation differed from an equivalent control group of children on standardized measures of achievement, teacher ratings of academic progress, promotion rates, and teachers perceptions of personal and social development at the end of the first grade. This study is different from most Reading Recovery evaluations in four ways. First, a control group was included. The Reading Recovery children were compared to an at-risk group that was equivalent to the Reading Recovery group on gender, ethnicity, and initial reading achievement.

Second, the Reading Recovery program in which this evaluation was conducted was in its first year of implementation and, therefore, would not be expected to produce a strong favorable outcome for Reading Recovery. The teachers were being trained as they performed their Reading Recovery tasks, and their training began at the same time that they began instructing children. While this study was not designed to compare results of beginning and mature programs, it did have the goal of ascertaining whether significant gains can occur in a new program with inexperienced teachers.

Third, in addition to standardized achievement tests, teachers' assessments were used to measure the extent to which the Reading Recovery and control children demonstrated their academic progress in the regular classroom. Fourth, an assessment of personal and social development was included to determine whether the Reading Recovery program affected children in areas other than reading achievement.

Method

Program Description

A local foundation offered support to a school district for implementation of Reading Recovery at the beginning of the school year. Although the school district had not completed the planning and teacher training for Reading Recovery, it accepted the support and implemented the program while the Reading Recovery teachers were being trained. Thus, teachers began their training at the same time they began instructing children in Reading Recovery. The foundation also required that a concurrent external evaluation be conducted and this paper presents the results of that endeavor.

Because resources were not available for full implementation of the program, the district chose to employ one full-time and two part-time teacher leaders and to select one classroom teacher from each of its 34 elementary schools to become the Reading Recovery teacher for that school. The Reading Recovery teachers-in-training spent one half of the school day working individually with Reading Recovery children and the other half working with other children in small "literacy groups."

Selection of Subjects

Limited resources and the large size of the school system prevented access to Reading Recovery services for every child in the first-grade cohort who was in need. For this reason, one classroom in each of the 34 schools was randomly designated the classroom from which the Reading Recovery children were chosen, and a different classroom was randomly designated the classroom from which the control group was selected. Children were randomly placed into first-grade classrooms prior to designating the class for the selection of Reading Recovery or control group students.

For the selection of the particular children who would receive Reading Recovery instruction, the classroom teacher ranked all children from highest to lowest on reading ability. Using the six tests of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a), the Reading Recovery teacher individually tested the children who were ranked in the lowest one third of the class and selected the four having the lowest test scores to be tutored individually in the Reading Recovery program. For the selection of the control group, the classroom teacher ranked the six lowest readers in the control class, and the Reading Recovery teacher tested the lowest four using the six tests of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a). If the tests indicated that any child's reading level was higher than acceptable for inclusion in Reading Recovery, the next child on the list was tested.

This procedure resulted in the selection of a Reading Recovery group and a control group, with 107 children in each group. The two groups were equivalent on gender, ethnicity, and scores on all six tests of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a). Approximately 70% of the children in each group were minorities (African-American), and approximately 60% of the children were boys. The Reading Recovery group and the control group in each school lived in the same neighborhood, and an equal number of children in each group (the majority) were in the free or reduced lunch program. The school system administered the *Iowa Test of Basic Skills* (Hoover,

Hieronymus, Frisbie, & Dunbar, 1996) in early fall to all first graders.

A multivariate analysis of variance (MANOVA) indicated that the Reading Recovery and control groups did not differ on any of the fall *Iowa Test of Basic Skills* (ITBS) scales, confirming that the groups were equivalent on reading achievement. Some children moved out of the district during the school year, and others were absent when some of the tests were administered in the spring. All Reading Recovery and control children in the original sample who remained in the school were included in the final sample, with the exception of one Reading Recovery child and two control group children who were placed in Special Education classes early in the year. No child was eliminated from the Reading Recovery program or the evaluation for any other reason.

Procedures

Reading Recovery teachers, using standardized materials and procedures, provided individualized lessons for 30 minutes each day to children in the Reading Recovery group. A student who reached a reading level within the average range of the class was "discontinued" from the program and replaced by another student. Only children from the first wave of students, not the replacements, were studied. The Reading Recovery children were participating in regular first-grade classroom instruction except for the 30 minutes each day during which each child had an individual session with the Reading Recovery teacher. The control group children were participating in the regular classroom program and in any special activities that were available to the other first-grade children, with 66% of them participating in the daily literacy groups conducted by the Reading Recovery teachers.

In April, the school system administered the spring *Iowa Test of Basic Skills* to all first-graders. In May, the *Gates-MacGinitie Reading Test* (MacGinitie & MacGinitie, 1989), a widely used battery that yields four test scores, was administered to the Reading Recovery and the control groups. The six tests of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) were also administered to both groups.

In May, the classroom teachers of both groups rated the children's growth over the school year in four academic areas and on five personal/social attributes using the *Classroom Teacher Assessment of Student Progress*. This instrument, which is included in the Appendix, consists of two parts. The first requires the teacher to use a 5-point Likert Scale for rating academic progress in each of the following areas: mathematics, reading comprehension, oral communication, and written expression. The second part requires the use of a 5-point Likert Scale for rating

growth in the following personal and social attributes: following directions, work habits, self-confidence, social interaction with adults, and social interaction with peers. This instrument, which was developed for and used extensively in large-scale evaluations (Quay & Kaufman-McMurrain, 1995; Quay, Kaufman-McMurrain, Minore, Cook, & Steele, 1996; Quay, Kaufman-McMurrain, Steele, & Minore, 1997), was shown to have high test-retest reliability, yielding correlations ranging from .86 to .92 for the nine scales representing the various characteristics.

The classroom teachers of the Reading Recovery children and the control group children were also queried on retention and promotion status. They indicated on the bottom of the *Classroom Teacher Assessment of Student Progress* form whether each child would be promoted or retained.

Results

The number of children remaining in the sample for the final testing in May decreased for several reasons. Two children in the control group and one child in the Reading Recovery group were placed in Special Education and did not continue in the regular classroom or the Reading Recovery program. If such a small number had remained in the final sample, the results would either remain the same or show an even larger difference in favor of the Reading Recovery group. Some children moved out of the district during the school year, and others were absent when some of the tests were administered in the spring. For example, the *Gates-MacGinitie Reading Test* was administered to 88 Reading Recovery and 93 control children, but the *Iowa Test of Basic Skills* (ITBS), administered by the district over a period of a week, yielded complete data on 82 Reading Recovery children and 86 control children because some children were absent for one or more days of testing.

Prior to the analysis of each spring measure, the fall data for that measure were re-analyzed comparing only the children included in the spring analysis. The two groups remaining in the sample in the spring had been equivalent on all variables in the fall. That is, even with the attrition, the remaining groups did not differ on any of the variables measured in the fall. The analyses and results of each measurement are described separately below.

Iowa Test of Basic Skills

Table 1 presents the means and standard deviations for the spring scores of the ITBS. Inspection of the means revealed that the Reading Recovery group had higher scores than the control group on all tests. A

MANOVA indicated that the two groups differed significantly on the spring ITBS Language Tests, F (6, 161) = 4.58, $p < .001$. ANOVA's indicated that differences occurred on Language Total, F (1, 166) = 4.98, $p < .05$; Reading Comprehension, F (1, 166) = 18.72, $p < .001$; Reading Total, F (1, 166) = 3.92, $p < .05$; and Word Analysis, F (1, 166) = 6.11, $p < .05$. The groups did not differ significantly on Vocabulary and Listening subtests.

Table 1. Means and Standard Deviations for the *Iowa Test of Basic Skills* Language Tests

Test	Reading Recovery Group Mean (SD)	Control Group Mean (SD)
Listening	39.57 (18.04)	38.67 (17.11)
Reading Comprehension*	48.60 (13.41)	39.08 (14.40)
Vocabulary	39.64 (16.57)	38.67 (17.11)
Word Analysis*	36.55 (16.85)	29.52 (18.66)
Reading Total*	43.88 (14.60)	39.13 (15.96)
Language Total*	39.34 (14.33)	33.85 (16.50)

*$p < .05$; **$p < .01$; ***$p < .001$.

Gates-MacGinitie Reading Test

Inspection of the means, listed in Table 2, revealed that the Reading Recovery group had higher scores than the control group on all subtests of the *Gates MacGinitie Reading Test*. A MANOVA indicated that the two groups differed significantly on this standardized test, F (4, 176) = 18.48, $p < .001$. ANOVA's indicated they differed on all four subtests: Final Consonants, F (1, 179) = 43.55, $p < .001$; Initial Consonants, F (1, 179) = 22.28, $p < .001$; Sentence Context, F (1, 179) = 65.96, $p < .001$; and Vowels, F (1, 179) = 43.13, $p < .001$.

Table 2. Means and Standard Deviations for the *Gates-MacGinitie Reading Tests*

Test	Reading Recovery Group Mean (SD)	Control Group Mean (SD)
Initial Consonant***	13.30 (1.80)	11.59 (2.90)
Final Consonant***	12.36 (2.34)	9.80 (2.85)
Vowels***	12.23 (2.55)	9.16 (3.61)
Context in Sentence***	13.07 (2.54)	9.44 (3.38)

*$p < .05$; **$p < .01$; ***$p < .001$.

Classroom Teacher Assessment of Student Progress

The classroom teachers rated the Reading Recovery children significantly higher than the control group children in all areas. Means and standard deviations for the *Classroom Teacher Assessment of Student Progress* are listed in Table 3. A MANOVA computed to compare the groups on teacher ratings of progress on all achievement and personal/social variables was significant for the Reading Recovery group, F (9, 167) = 10.52, $p < .001$. ANOVA's indicated the Reading Recovery group and the control group differed on the ratings in all areas: mathematics, F (1, 175) = 8.79, $p < .01$; oral communication, F (1, 175) = 30.50, $p < .001$; reading comprehension, F (1, 175) = 67.93, $p < .001$; written expression, F (1, 175) = 46.13, $p < .001$; following directions, F (1, 175) = 24.83, $p < .001$; self-confidence, F (1, 175) = 11.82, $p < .001$; social interaction with adults, F (1, 175) = 19.28, $p < .001$; social interaction with peers, F (1, 175) = 18.61, $p < .001$; and work habits, F (1, 175) = 16.03, $p < .001$.

Table 3. Means and Standard Deviations for the *Classroom Teacher Assessment of Student Progress*

Area	Reading Recovery Group Mean (SD)	Control Group Mean (SD)
Mathematics**	2.91 (0.84)	2.56 (0.70)
Reading Comp***	3.55 (0.95)	2.31 (0.91)
Oral Communication***	3.17 (0.83)	2.52 (0.70)
Written Expression***	3.16 (0.96)	2.25 (0.96)
Following Directions**	3.14 (0.98)	2.46 (0.81)
Work Habits***	3.02 (1.02)	2.42 (0.91)
Self-Confidence**	3.39 (1.12)	2.85 (0.94)
Social Interaction with Adults***	3.28 (1.01)	2.67 (0.78)
Social Interaction with Peers***	3.25 (0.95)	2.67 (0.77)

*$p < .05$; **$p < .01$; ***$p < .001$.

Promotion Rates

A chi square indicated that a significantly higher percentage of Reading Recovery than control group children were promoted at the end of the year, with 92% of Reading Recovery children and 74% of control children achieving promotion status, X^2 (1) = 9.50, $p < .01$.

An Observation Survey of Early Literacy Achievement

The Reading Recovery children had higher scores than the control children on all of the survey's tests as indicated in Table 4. A MANOVA

comparing the scores of the Reading Recovery and the control group children on the spring administration of *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) was significant in favor of the Reading Recovery group, F (6, 171) = 24.28, $p < .001$. ANOVA's indicated the two groups differed significantly on all six tests: Concepts about Print, F (1, 176) = 85.32, $p < 001$; Dictation, F (1, 176) = 44.15, $p < .001$; Text Reading Level, F (1, 176) = 125.36, $p < .001$; Word Test, F (1, 176) = 21.41, $p < .001$; Writing Vocabulary, F (1, 176) = 72.95, $p < .001$; and Letter Identification, F (1, 176) = 3.92, $p < .05$.

Table 4. Means and Standard Deviations for *An Observation Survey of Early Literacy Achievement*

Test	Reading Recovery Group Mean (SD)	Control Group Mean (SD)
Concepts About Print***	20.65 (3.04)	16.03 (3.64)
Dictation***	33.92 (4.30)	26.96 (8.84)
Letter Identification*	52.89 (4.85)	51.10 (6.57)
Text Reading Level***	16.38 (6.15)	6.72 (5.55)
Word Test***	18.20 (3.03)	13.41 (5.71)
Written Vocabulary***	46.37 (12.20)	29.98 (13.40)

*$p < .05$; **$p < .01$; ***$p < .001$.

Summary and Discussion

Reading Recovery has been the subject of innumerable published and unpublished reports regarding the program's effectiveness in raising children's literacy achievement to the average level of their peers. The procedure used in most Reading Recovery research and evaluation is to administer reading achievement pre-tests, to provide the Reading Recovery treatment, and then to administer reading achievement post-tests. In addition, Lyons (1998) reported replication studies of North American children across a decade of instruction. Using these methodologies, researchers have shown that Reading Recovery students make significant gains in reading achievement during this interval of instruction. However, in addition to the Reading Recovery treatment, forces such as maturation, reading instruction in the first-grade classroom, and a variety of other school-related experiences occur during the interval between the pre- and post-tests. Thus, whether Reading Recovery is responsible for the achievement gains cannot be determined conclusively with these methodologies. To assure the gains result from Reading Recovery, and not from other factors, Reading Recovery children must

be compared to a control group of equivalent children who do not receive the Reading Recovery treatment and typically these pre-and post-test comparisons do not do so.

It was the purpose of the present study to evaluate the effects of Reading Recovery with an experimental method that included a control group of children who were initially equivalent to the Reading Recovery group on gender, ethnicity, and pre-test reading achievement as measured by both *An Observation Survey of Early Literacy Achievement* (Clay, 1993a) and the *Iowa Test of Basic Skills*. After attrition, the two groups of children who remained in the study at the end of the first grade continued to be equivalent in all aspects.

The results of the few studies that included comparable control groups are consistent in showing that Reading Recovery children are superior to control children on post-test measures of reading achievement. However, these studies have been conducted in elementary schools that have highly trained teachers in Reading Recovery programs that have been in place for several years. Most local Reading Recovery programs do not have equivalent experience levels to those used in the evaluations. Hiebert (1994), on the basis of data obtained from secondary sources, concluded that Reading Recovery children in more established programs reached higher reading levels than Reading Recovery children in less mature settings. However, controlled studies directly comparing gains in Reading Recovery programs of different maturity levels have not been found. One purpose of the present study was to ascertain whether gains can be achieved at a very early point in Reading Recovery program implementation. The results indicated that, even in this very new program where the teachers were learning Reading Recovery teaching procedures as they were tutoring the first group of children, Reading Recovery had significant effects on all *Gates-MacGinitie Reading Test* subtests and on most of the ITBS language tests at the end of the school year. Thus, it can be concluded that even a very immature Reading Recovery program can produce achievement gains.

Not only did standardized achievement tests indicate Reading Recovery children were superior to the control children at the end of the first grade, but also the classroom teachers perceived them to have made significantly greater academic progress. Using the *Classroom Teacher Assessment of Student Progress*, the Reading Recovery children's classroom teachers indicated a higher level of progress for the Reading Recovery children in reading, mathematics, oral communication, and written expression than the control group children's classroom teachers

indicated for them. The validity of these ratings is substantiated by the teachers' higher promotion rates for the Reading Recovery children. Further, these classroom teacher ratings add validity to the standardized test results by showing that, in addition to making gains on standardized tests, the Reading Recovery children could demonstrate their progress in the classroom.

It is reasonable to assume enhanced reading ability and increased academic achievement would positively affect children's personal and social development, particularly their self-confidence. To add to the work of Cohen et al. (1989), which found that children had increased self-efficacy regarding reading and writing, it was the purpose of the present study to determine children's personal and social growth during Reading Recovery instruction. The classroom teachers involved in this investigation rated the Reading Recovery children higher than the control children on their positive development in following directions, self-confidence, social interaction with adults, social interaction with peers, and work habits. This finding strongly supports the notion that Reading Recovery is not simply a program that facilitates learning to read, but also that it has wide-ranging indirect effects on children's development.

Limitations of the Study and Suggestions for Future Research

One limitation of this study involves the mobility of the population. As with most research involving children from lower socioeconomic strata, attrition was a problematic factor. However, an analysis of the pre-test data on only the children who remained in the study until the end revealed that there were no initial differences between the groups of children in the final analyses.

Another limitation of the current study is that the research design did not permit the control of bias in the teacher ratings. On the *Classroom Teacher Assessment of Student Progress*, the classroom teachers of the Reading Recovery children knew the children they were rating were receiving Reading Recovery instruction. Their ratings may have been positively influenced by this knowledge; that is, they may have expected the children to make progress for that reason. Classroom teachers' ratings are important because they illustrate a different dimension of progress than standardized tests. For future research, it may be possible to eliminate this bias by having external observers, who are unaware of which children are participating in Reading Recovery, sample the children's classroom behavior and record their observations.

The greatest limitation of this study, as well as other Reading Recovery studies and much research conducted in school settings, is that Reading Recovery students and control group students had different classroom teachers. In the real world, this study had to be conducted in this way, but a better design is possible if school personnel could be convinced to accept it. We strongly recommend a future research design that would control for the influence of the classroom teacher. The investigation would be designed so that the children with the lowest reading levels are identified prior to assignment to their first-grade classrooms. All children who are so identified would then be randomly assigned to either a Reading Recovery group or a control group. Finally, an equal number from each group would be randomly assigned to each first-grade classroom.

Finally, additional longitudinal research is needed to ascertain the permanence of the observed early gains attained by Reading Recovery children. Questions of interest include: How long do the gains persist? Do the control group children eventually catch up with the former Reading Recovery children and if so, when? Such information has implications for the cost of early intervention programs. It is a limitation of this study that it spanned only the year of the intervention, precluding an evaluation of the sustainability of the gains achieved by the Reading Recovery children. Although there are studies that support the stability of the gains, others suggest otherwise and unfortunately the present study does not contribute to a clarification of this issue.

For example, Pinnell et al. (1994) found that the gains of Reading Recovery children were sustained at the beginning of the second grade. Statewide follow-up studies in Texas (Askew, Frasier, & Compton, 1995) and Indiana (Schmitt, 1999) have indicated that former Reading Recovery children are performing as well as their classmates on the *Gates MacGinitie Reading Test* in third and fourth grades. On the other hand, DeFord and her colleagues (DeFord, Pinnell, Lyons, & Young, 1988) assessed text reading level and writing vocabulary at the end of second and third grades and found that the gains of the Reading Recovery group exceeded those of the control during the year of the intervention, but the two groups did not differ in the gains they made during the second and third years. And, Center, Wheldall, Freeman, Outhred, & McNaught (1995) found that significant gains occurred mainly during intervention and less so thereafter.

Implications of the Study

In answer to the question "Does Reading Recovery work?" Shanahan and Barr (1995) respond, with some reservations, in the affirmative. They argue that "...clearer specifications of its success are likely only through additional, more rigorous research than has been conducted up to now" (p. 989). The present study provides a rigorous examination of some very important questions about the immediate effects of Reading Recovery. It permits the conclusion that the early intervention program does indeed "work" as demonstrated by the finding that Reading Recovery children are significantly superior in many characteristics to equally at-risk children who have not participated in Reading Recovery. The results provide further confirmation of previous findings that Reading Recovery children are superior to control group children on standardized reading and language tests and on rates of promotion.

In addition, this study demonstrates that Reading Recovery children's teachers perceive them to be making significant progress, not only academically, but also in personal and social development. Since this enhanced development and performance occurred in a setting where the Reading Recovery teachers were being trained as they were tutoring the very first group of children in a brand new Reading Recovery program, other beginning Reading Recovery programs can be optimistic regarding their potential for benefiting children even at an early stage of program implementation.

The major implication of this study is that schools considering implementing Reading Recovery can feel comfortable that teachers who are concurrently being trained and providing Reading Recovery services to children can be very effective in producing results. Also, since the results of this study with in-training teachers are so robust, it seems likely that as experience increases, Reading Recovery teachers will be even more effective.

This study served to substantiate the results of several other investigations (e.g., Huck & Pinnell, 1986; Iversen & Tunmer, 1993; Pinnell, Huck, & DeFord, 1986; Pinnell, Lyons, DeFord, Bryk, & Seltzer, 1994) in demonstrating that Reading Recovery children are superior to control group children on post-test measures of reading achievement. Since this study used a different methodology than other studies and still produced the same result, the interpretation that Reading Recovery is an effective program for children at risk of failure can be made with a great deal of confidence.

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Appendix

Classroom Teacher Assessment of Student Progress

Child's Name: _____

School: _____ Teacher: _____

Place a check in the box that best describes this child's growth in each academic area during this school year.

Academic Area	No Growth	Marginal Growth	Average Growth	Above Average Growth	Exceptional Growth
Reading comprehension					
Written expression					
Oral communication					
Mathematics/Number Concepts					

Place a check in the box that best describes this child's growth in each personal characteristic during the school year.

Personal Characteristics	No Growth	Marginal Growth	Average Growth	Above Average Growth	Exceptional Growth
Ability to follow directions					
Work habits					
Social interaction with adults					
Social interaction with peers					
Self-confidence					

Please check below to indicate whether this child will be promoted or retained.

This child will be promoted to second grade. _____

This child will be retained in first grade. _____

Biographical Information

Lorene C. Quay, recently retired, continues to work and do research as professor emerita in the Department of Early Childhood Education at Georgia State University. Prior to her retirement she was a university research professor. She has published extensively in the areas of child development and early education.

Donald C. Steele is a statistician in the Department of Early Childhood Education at Georgia State University. He has extensive experience in mathematics, statistics, and research design. He has co-authored numerous articles with various members of the department.

Clifford I. Johnson is an associate professor of early childhood education and executive director of the Georgia State University Reading Recovery and Literacy Collaborative programs. He teaches graduate courses in developmental reading, teaching and learning, and the Reading Recovery theoretical courses for teacher leaders in training. Dr. Johnson has served on the Board of Directors since the beginning of the Reading Recovery Council of North America (RRCNA). He is currently the President of RRCNA, and he is the editor of the RRCNA Site Coordinators Handbook.

J. William Hortman is the associate superintendent for administration, technology, and information for the Muscogee County School District in Columbus, Georgia. He has a strong background of training and experience in measurement, statistics, educational research, and program evaluation. He assisted in the implementation and evaluation of a three-year Reading Recovery project in thirty-four elementary schools in the MCSD.

Inventing Literate Identities: The Influence of Texts and Contexts

Prisca Martens, Towson University
Susan Adamson, Indiana University

Abstract

This study investigated the influence of different (and sometimes conflicting) literacy contexts on the literate identities of "struggling" beginning readers. The participants were five first graders from three different classrooms in a school in a large Midwestern city. The children met with the researchers in a Reading Club twice weekly throughout the school year to explore reading and writing strategies that focused on predicting and constructing meaning. The classroom instruction of the two children reported here focused them on accuracy in reading and writing. The findings reveal that supplementary programs may not be able to overcome classroom experiences that focus on accuracy and skills.

In the picture storybook *Falling Through the Cracks* (Sollman, 1994), children who feel bored, fearful, or silenced for different reasons literally shrink and fall through the floorboards of the classrooms. Underneath, while the feet and legs of others who are beginning to slip are dangling precariously above them, two of the "fallen" children contemplate their predicament and that of the others. They wonder "why a kindergartner [is] already waist-deep on his first day of school." Indeed, why would a kindergartner be waist-deep on his first day of school?

Our purpose in this article is to share what struggling first-grade readers taught us about being "waist-deep" when the school year begins. We began our study intent on understanding and creating strategies we believed would prevent them from "falling through the

cracks." The study that ultimately developed, however, explored a complexity of literacy learning we hadn't seriously considered, namely, the influence of different (and sometimes conflicting) literacy contexts on beginning readers. How do beginning struggling readers "adapt" to and make sense of different literacy contexts that are both intent on preventing children from falling through the cracks, but that also provide them with different kinds of literacy experiences? For example, in one context readers focus on constructing meaning while reading predictable books and writing with invented spellings, and in the other context they focus on decoding words accurately in books with highly controlled vocabularies and spelling correctly. How do the literacy experiences in these different contexts, grounded in different theoretical perspectives, influence the children? What effect do the experiences in these contexts have on the children as they invent their literate identities as readers and writers?

The lessons we learned in this study are humbling for us in that we did not leave this study feeling "successful" in helping children become "better" readers and writers. Instead, what the children taught us challenged our belief, held also by others, that supplementary programs can always compensate for curricula that cannot, for whatever reason, accommodate the needs of diverse learners. Currently, educational trends and policies are mandating a particular sequence of instruction and narrowly-defined performance objectives, intimidating teachers with test scores and discouraging them from exercising their professional judgments, and sorting children according to test scores and strict developmental standards. At a time when programs and test scores are overshadowing children's real needs and teachers' professional knowledge and experience, our experiences and the lessons we learned are compelling and important to understanding children's literacy development, especially those who are waist-deep when the school year begins.

Our intention in this article is not to be critical of Miss L., the teacher in this study, or of other teachers in similar situations. We acknowledge that we enjoyed a pedagogical freedom; we were able to create a context that we believed supported most generously the children's literacy learning and allowed them to join the "Literacy Club" (Smith, 1988). We were not encumbered or constrained, as Miss L. was, by such things as curriculum mandates and accountability dependent on test scores. We are well aware that the pressures she felt influenced the classroom and instructional decisions she made.

We will begin by sharing our theoretical stance and providing background on our study. Then we will introduce two of the children, Lillian

and Peter, and examine in depth their literacy development and the literate identities they invented. We will conclude by discussing the perplexing anomalies we discovered as Lillian and Peter worked to be readers in two very different and mostly conflicting contexts.

Theoretical Framework

The theoretical perspective that shapes this study is grounded in transactional socio-psycholinguistic theory that views children as active constructors of knowledge and meaning in reading and writing and in their lives as they transact with others in their sociocultural communities. Ken Goodman's (1994) research in miscue analysis is foundational to this theory. His research reveals reading and writing (Goodman, 1994) as processes of constructing meaning in which readers actively integrate thought and language. This theory is also rooted in the work of other researchers, such as Piaget (1971), Vygotsky (1978), Halliday (1975), and Rosenblatt (1981). In this study we draw primarily on work in four areas: language learning as a process of invention, reading as a process of constructing meaning, the role of texts and contexts in reading, and the formation and role of readers' literate identities in their reading. Each will be described below.

Language Learning: A Process of Invention

Invention is the process by which children, like all human beings, socially construct language in order to learn and think for themselves and to communicate socially and dialog with others for their own survival and development (Goodman, 1996). When children have a particular authentic function, purpose, or need for language in their sociocultural community (Halliday, 1975), they invent it, generating their best guesses, their theories or hypotheses, based on their perceptions and current understandings of the world and how it works (Ferreiro, 1990).

Language inventions are not random or capricious, however. They are influenced and constrained by the common but ever-changing social conventions children naturally experience daily in their interactions with knowledgeable others who support them in exploring language in meaningful contexts (Dyson, 1993; Goodman, 1986; Vygotsky, 1962). When children use and share their inventions with their family and community and discover their inventions do not "match" others' language or literacy, they often experience a tension or disequilibrium (Piaget, 1970) that pulls and pushes them in different directions. Children relieve these tensions by revising and inventing again.

Children's language inventions reveal the experiences, knowledge, and beliefs the children have about literacy and the world. Through their inventions children work to make sense with intentionality and purposefulness (Harste, Woodward, & Burke, 1984). By inventing language at the point of need, drawing on what they know from past experiences in a variety of literacy contexts, children take language and make it their own. They figure out how it "works" and how it relates to them personally. Inventions are always new, meaningful, and powerful for the inventor, regardless of if or when they were previously invented by others. Eleanor Duckworth (1987), a Piagetian scholar, states:

> I see no difference in kind between wonderful ideas that many other people have already had, and wonderful ideas that nobody has yet happened upon. That is, the nature of creative intellectual acts remains the same, whether it is an infant who for the first time makes the connection between seeing things and reaching for them...or an astronomer who develops a new theory of the creation of the universe. In each case, new connections are being made among things already mastered. (p. 14)

Inventions are natural and necessary to all language learning, both oral and written (Goodman, 1993). They are natural because of our creative nature and need for sense and order in our world, and necessary because they require us to take risks and without the willingness to take risks, learning is greatly impeded. Only when language users take risks do they outgrow their current selves to learn and grow (Piaget, 1973; Vygotsky, 1978). Without risk, their learning is seriously curtailed.

Reading and Learning to Read: A Process of Constructing Meaning

Over thirty years of reading research documents reading as a dynamic, transactional, socio-psycholinguistic process of constructing meaning and making sense of print (see studies in Brown, Goodman, & Marek, 1996; Clay, 1998; Goodman, 1994; Rosenblatt, 1994). This research reveals that to construct meaning readers integrate three language cueing systems—the semantic system (meaning), the syntactic system (grammar), and the graphophonic system (print)—with their knowledge of the world to infer and predict meaning, making corrections when necessary (Goodman, 1996). What distinguishes proficient and less proficient readers is not the reading process itself but the read-

ers' experience with reading and how flexibly and proficiently they control the process (Goodman, 1994).

Children beginning to read, then, use the same reading process of more experienced readers and work to learn how to control it (Goodman, 1994). As with all language learning, they invent how they think the reading process works, just as they invented oral language when they were learning how to speak. Drawing on knowledge from the variety of social contexts in their experience, they create hypotheses for how to make what they see in print match what they already have experience with in oral language (Goodman, 1996). When they read, they test their invented hypotheses, reflect on the experience and what they continue to observe and hear from other readers, revise their hypotheses, and invent again. Gradually, they move their inventions of how reading "works" within the boundaries of "conventional" reading. Literacy research has documented for decades how children invent written language and revise their inventions until they correspond with the social conventions of written language (Ferreiro & Teberosky, 1982; Goodman & Altwerger, 1981; Martens, 1996).

Texts and Contexts

Language learning, whether in learning to speak, read, or write, never occurs in a "vacuum." Learners are immersed in the rich authentic functional language of their world and this language provides the "text" that they draw on for their inventions (Dyson, 1999). Texts, in this sense, are more than print on paper; they are any language meanings, oral or written, playing a role in the context of a situation (Halliday & Hasan, 1985).

All texts are inherently intertextual in that they draw and depend on meanings in other texts (Bloome & Dail, 1997). It is inevitable that we bring the oral or written texts of our previous experiences in other contexts to our new contexts. We perpetually interweave these texts and contexts into the emerging tapestry of our current experience. Hartman (1992) states that any text is composed of previous texts and resources that are interwoven with "threads all anchored elsewhere," (p. 297) giving the current text a particular texture and pile. He further suggests that a text is a "complex dialogue" resembling a collage of others' voices rather than an "isolated monologue" (Hartman, 1992, p. 297). Texts and contexts then are aspects of the same process: new texts are created and interpreted in the context of other texts in the total environment (Halliday & Hasan, 1985).

Literate Identities and Reading Proficiency

Literate identities are children's perceptions of themselves in relation to literacy. These identities are not "fixed;" they are shaped and invented as children draw on their experiences in different literacy events with the texts they read and write (Bloome & Dail, 1997; Harste et al., 1984; Martens, Flurkey, Meyer, & Udell, 1999). As children operate within various cultural and social contexts, literate identities also reflect the influence of particular cultural practices (Gee, 1990) and social practices (Luke & Freebody, 1997; Taylor, 1983). In the act of engaging in literacy events, children interpret themselves in relationship to their world, locating themselves both in view of the experiences they have had and the experiences they imagine (Sumara, 1996).

Studies demonstrate that readers' literate identities influence how the student reads. For example, readers who identify themselves as capable and "successful" readers engage more readily in literacy activities (Guice & Johnston, 1994; Young & Beach, 1997).

Research in retrospective miscue analysis (RMA) provides powerful evidence of the relationship between readers' identities and their reading proficiency. Numerous studies (see Goodman & Marek, 1996) reveal that when readers reflect on reading and their strengths and strategies as readers and are supported to develop an appreciation of those, they revalue reading and themselves as readers and, as a result, read and control the reading process more proficiently.

Studies such as these demonstrate the influence learners' theories and beliefs about literacy and themselves as literacy learners have on the literacy process. As we examine Lillian's and Peter's reading, learning, and inventions and the different "texts" they "read" in different contexts, we are cognizant of Dyson's (1995) notion that the purpose of a case study is not to generalize findings, but to offer insight into the extraordinarily complex process of literacy learning. These cases are proof of that. They challenge us to create literacy learning contexts that keep students like Lillian and Peter from falling through the cracks.

Method

Participants and Site

The site for our study was an elementary school in a large Midwestern city. The school was funded well enough to have a large library, staffed with a full-time librarian, and numerous teacher and student supports, including resource teachers, classroom paraprofessionals, and at least five computers per classroom in addition to a computer lab.

The participants in the study were five first-grade children from three different classrooms. At our request the three first-grade teachers each selected one or two students whom they perceived as having difficulty with literacy, based on the children's classroom performance (e.g., writing tasks, testing, reading evaluation, etc.), and in need of additional time for reading and writing. With these children we formed a Reading Club. Lillian and Peter, the two children we will focus on here, were both in Miss L.'s classroom.

The Classroom Context

Miss L. had been teaching for approximately 17 years. Based on Miss L.'s comments and our observations, it seemed to us that Miss L. diligently followed the prescribed textbooks and basal materials adopted by the school. For example, based on the associated test scores, half of her 21 students, including Peter and Lillian, were in her lowest reading group. Realizing this group was very large, she considered dividing it so half of the children could work with the paraprofessional. She thought about these logistics aloud and once resolved said, "Oh, that won't work. I only have one teacher's manual." The pressure of accountability and test scores compelled Miss L. to follow closely the curriculum detailed in the textbook materials. Miss L. was a highly experienced teacher who worked hard and cared about her students. But rather than trust her own professional knowledge and informed insights to make instructional decisions, she relied on the "authority" (Peirce, in Buchler, 1955) of published materials to assure her students' success as readers.

For classroom reading instruction, the children drilled vocabulary and phonics, completed workbook pages and worksheets on skills, and read short predictable books from the basal publisher, with a focus on accuracy in word recognition. The children wrote in journals several times a week, often in response to a prompt. While Miss L. allowed invented spelling, she emphasized correctness. In addition to the Word Wall, each child collected "personal" words with accurate spellings written on note cards and kept together on a ring. In October, a month after the start of the school year, Miss L. was worried that she might have to retain both Lillian and Peter because they were not succeeding in their classroom work or on the tests included in the text materials.

The Reading Club Context

Our Reading Club met in a private area outside of the three classrooms for 30 minutes twice a week from September to April. Because of our theoretical beliefs regarding reading and learning to read, we

92

immersed the children in reading and writing predictable books. Since these texts highlight the predictable nature of language, we knew they would support the children's reading inventions as they practiced how to integrate efficiently and effectively multiple language cues with a focus on constructing meaning (Smith & Elley, 1997) and to help the children perceive themselves as readers and writers. The literacy experiences of our sessions included activities such as: reading to the children, modeling writing for them, having them read predictable books to us, drawing, and writing. The writing was sometimes done in journals in response to a book we had read, and sometimes was a drafted story that we would later publish. Usually we all worked as a group, weaving our individual interactions with each child into the group time. On occasion, though, one of us would take a child aside and work one-on-one with him or her.

Data Collection and Analysis

The data were gathered through field notes, audio-tape transcriptions of group and one-on-one experiences, video tapes and transcriptions of one-on-one experiences, classroom visits, teacher interviews, parent interviews, observations of Peter and Lillian in settings outside the classroom, writing samples, reading samples, and retrospective miscue analyses (RMA).

To analyze the data we used constant comparative analysis (Glaser & Strauss, 1967) and thematic analysis (Spradley, 1980) and entered the themes on a meta-matrix (Miles & Huberman, 1994) for further analyses. Themes were interpreted and qualitatively aggregated (Stake, 1995) across students' experiences. Readings were analyzed following standard miscue analysis procedures (Goodman, Watson, & Burke, 1987).

We now invite you to meet Lillian and Peter.

Lillian

Lillian is a healthy, happy six-year-old, African American girl. She is kind and gentle with her peers, and always respectful of adults. Although shy, she makes eye contact easily and smiles sweetly when you talk with her. At the time of our study, she lived with both of her parents in a house in a nearby neighborhood. While her parents were not 'visible' participants in Lillian's education (e.g., serving as parent volunteers), most likely because they both worked, they did attend the parent conferences and seemed to support her learning at home. Lillian told us that she liked to draw and drew often at home. She also said that

she liked to read and that her mother read to her. Though quite reticent at first, Lillian appeared to us to be a competent language learner. In the classroom, however, in addition to being in the "lowest" reading group, she scored poorly on class tests and benchmark measurements, and was pulled out of class for tutoring in math. Lillian tended to use mostly conventional spelling in her classroom journal but generally wrote little or not at all. On one occasion, Miss L. confided she thought this was because Lillian was lazy.

We found that Lillian was orchestrating proficiently the language cueing systems. When she spoke, or wrote, or listened, or read, she understood that language was a sense-making process. She used her knowledge of language to make sense of what she saw in print and heard in books. This knowledge also informed her writing and speaking. Even from a cognitive skills view Lillian seemed to fulfill what some theorists propose (Snow, Burns, & Griffin, 1998; Stanovich, 1994; Yopp, 1995) and the National Reading Panel Report (Langenberg et al., 2000) constitutes as "prerequisite" to reading acquisition. Lillian demonstrated both "phonological awareness" and "alphabetic coding" in reading, writing, and speech. Lillian also performed "phonemic segmentation" (Yopp, 1995) which we observed when she was writing.

Early evidence of Lillian's knowledge about how language and in particular how reading works can be found in Figure 1. During this reading, Lillian was "coached" (e.g., to look at the picture and initial letters, and to make predictions about what will happen next) to help her realize the pattern of the story. She caught on quickly and tracked with her finger as she read. In *All Fall Down* (Wildsmith, 1985), Lillian read "bird" instead of "butterfly" but corrected when she came to "bird" later in the line (line 1). She understood that the order of the words corresponded to how the animals were stacked in the picture.

From *All Fall Down* (Wildsmith, 1985)

(1) I see a bee and a butterfly (bird) and a bird and a rabbit and a seal and a ball.

(2) All fall down.

From *One Bee Got on the Bus* (Dennis, 1996)

(3) Four butterflies got on the bus.

(4) Three bats got on the bus.

(5) Two ladybugs (turtles) got on the bus.

Figure 1. Samples of Lillian's Reading in the Fall of First Grade

where she checked to make her correction. In *One Bee Got on the Bus* (Dennis, 1996), she made a meaningful substitution that had little graphophonic similarity (line 5). The picture, however, is somewhat misleading as these anthropomorphic ladybugs do indeed look like turtles getting on a bus. She had no reason to correct this miscue, as her substitution was acceptable both semantically and syntactically.

In our first session with the children, we read the book *Dog Breath* (Pilkey, 1994) and asked them to respond by sketching something from the story. Lillian engaged easily in the story, participating openly, and making thoughtful predictions. Her drawing conveyed her favorite part of the story but she struggled to draw it to her satisfaction, erasing and starting again on the other side of the paper. We persuaded her to write something about what she drew and when asked to read what she wrote (a string of letters that included letters from her name) she said, "It doesn't say anything, I bet you. I can't write." This response was fairly typical of her initially and suggests a rather fragile literate identity manifested as a lack of self-confidence. This may have been because what she knew and the way she knew it did not seem to her to be valued by others. And as we resembled the "teachers" she has encountered in her experience, she responded as she would have to any teacher. She was tentative about most of the initial literacy engagements she had with us and as such: drew laboriously and usually did not finish, regularly responded by saying "I can't do it," didn't share the work from our sessions with her classroom teacher, erased many of her writing and drawing attempts, and asked to copy from the book. While Lillian shared *verbally* many of her ideas for drawing, she knew we would ask her to write something about it, and so she said she only wanted to draw pictures for words she could spell.

Before too long, though, we began to see evidence that Lillian was trusting her knowledge, revaluing herself and feeling more confident. The following is an excerpt from our third session that took place in early October. At the time, we were doing an author study of Eric Carle and had just finished reading *The Very Busy Spider* (Carle, 1984). The students constructed a web and then made a 3-D spider for it. (Note: / / indicates the sound and < > indicates the name of the letter specified.)

Susan: Now, can you write something?

Lillian: I can't.

Susan: I know you can write something.

Lillian: I can't.

Prisca: What does s-s-spider start with?

Lillian: (Lillian writes an <s> on her paper) Give me that book (so she can copy the word "spider").

Prisca: No, see if you can figure it out.
Susan: How about this sound? /p/
Lillian: (she writes <P>)
Susan: /i/
Lillian: (she writes <I>, and this kind of exchange continues until she has written both spider [SPIDR] and web [WEB]

Lillian's engagement here is notably different. Just three sessions ago she was uncertain about writing her own name. We were very encouraged by her willingness to take a risk but also realized her need to take these risks in a context that was highly supportive.

Some of what we discovered eventually about Lillian came from the knowledge that she shared with her peers. For instance, in one session, Lillian supplied the letters for another child writing "Happy Birthday" and then asked if she could "put the next letter in for her." Just before it was time for her to go, Lillian wrote "HA ƷrFDAy to U." on her own paper. We noticed this kind of intertextual connection regularly. Access to predictable books, supported writing, social and meaningful literacy engagements, practice with an array of literacy strategies, and celebration of her knowledge via the Reading Club setting seemed to foster Lillian's literacy development. Her experience in the Reading Club was contributing in some very positive ways to her literate identity and we believed that valuing or perhaps revaluing her "self" would sustain her in the context of the classroom as well. We assessed her knowledge of language by observing her engaging in literacy in the following ways. We found that she:

- Recognized words in context
- Used conventional spelling to convey an idea (e.g., "HANNA LILLIAN PLAY")
- Made connections across texts from the author study
- Read the books we wrote together in our sessions
- Made predictions while reading and integrated picture clues
- Took risks to invent words to convey meaning (e.g., "HA BrFDAy to U." for "Happy Birthday to you.")
- Used a variety of orthographic conventions such as spacing and punctuation
- Proofread her writing and made corrections
- Articulated reading strategies (e.g., using picture clues, letter cues, and making sense)
- Drew detailed and connected pictures for the books she authored
- Used humor and symbols (e.g., ZZZ for sleeping) in writing and drawing

- Heard and represented separate sounds in her writing (e.g., /r/-/o/-/l/ and /h/-/o/-/p/)
- Monitored for meaning (e.g., "That doesn't make sense.")
- Made meaningful substitutions while she read

Lillian flourished in the first part of the year as successful literacy encounters enhanced her self-worth and nurtured her literate identity. She expressed enthusiasm for reading and relished illustrations that made rich and gratifying texts for her. She also clearly enjoyed the process of creating her own texts and drawings. On one occasion we had the students write and illustrate a book modeled after *Cookie's Week* (Ward, 1988). Hers was about her pet goldfish named Goldie. On each page, she drew a fish bowl full of water. By the last page, she had tired of coloring in all that water and announced that she's "not putting any more water in (the fish bowl). He's poor." Here, she not only demonstrates a keen sense of humor, but also uses a sophisticated literary tool, the metaphor, to convey knowledge about an issue of equity and social justice. Gradually, she began to share the books we made in our sessions with her classmates and teacher. She talked openly and giggled with her friends in the group. She wrote independently, finished her work *to her satisfaction*, asked to do more author studies, ably assisted her peers in their literacy attempts, and expressed pride in her work. Naturally, we were very pleased with her growth and especially that she appeared to be more self-assured. But, we were uneasy about the contradicting reports we were getting from her classroom teacher. The language proficiencies and self-confidence that Lillian now demonstrated so readily in the context of the Reading Club did not seem to be evident to Miss L. in the context of the classroom.

Quite unexpectedly, in February, Lillian's self-confidence, enthusiasm, and willingness to take risks began to diminish. She appeared tired and remote. At times, she did not participate. She responded regularly to the question "What would make sense?" with, "I don't know." She chose books that she had already read instead of new ones; she counted the pages of a book before reading it; and, once again she needed reassurance that what she was reading or writing was "right." Disturbing, too, was the fact that her attendance at school became very sporadic throughout the remainder of the school year. Her absences led Miss L. to believe that Lillian had moved when, in fact, she hadn't.

Despite these affective changes, we continued to observe Lillian learning and growing with numerous strengths. Figure 2 presents an example of her reading in April that was taken from a miscue analysis session where she read without any assistance, following standard mis-

cue analysis procedures (Goodman et al., 1987). Lillian's high quality substitutions demonstrate efficient reading and her focus on constructing meaning (lines 5, 6, and 8). In a subsequent RMA session, she read each of these lines without miscuing, revealing that she "knew" the words. Lillian also showed that she tracked her reading for meaning on line 7. Her prediction, which followed the previous pattern, resulted in an omission. When that didn't make sense to her, however, she worked to self-correct it before continuing. There is no question that Lillian experienced considerable growth in literacy learning during this school year. But the literate identity of this child in December is disturbingly different from the literate identity of this same child in April.

Reluctantly, Miss L. decided to promote Lillian to second grade. Miss L. said she knew Lillian was "low" but felt she could not retain "too many" children. Lillian has since left this school, apparently moved away as Miss L. had predicted.

From *My Friends* (Gomi, 1990)

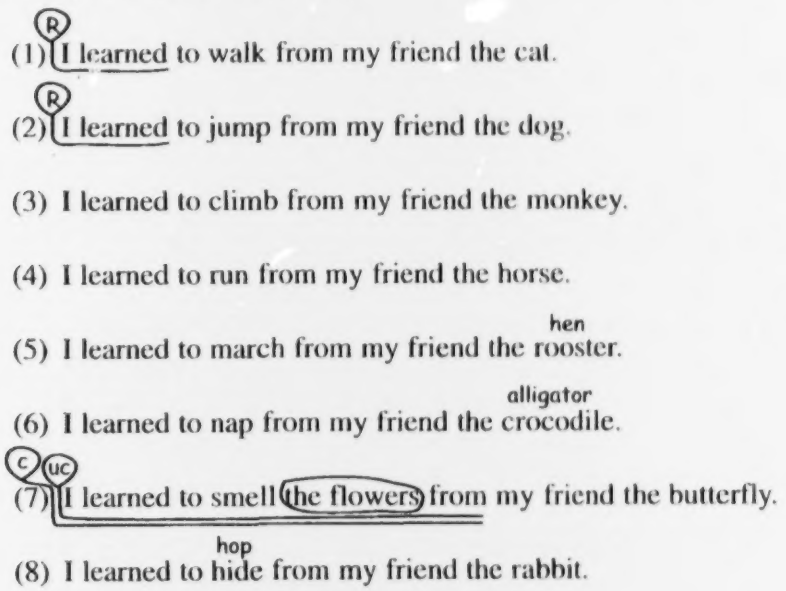
R
(1) I learned to walk from my friend the cat.
R
(2) I learned to jump from my friend the dog.
(3) I learned to climb from my friend the monkey.
(4) I learned to run from my friend the horse.
hen
(5) I learned to march from my friend the rooster.
alligator
(6) I learned to nap from my friend the crocodile.
C
UC
(7) I learned to smell the flowers from my friend the butterfly.
hop
(8) I learned to hide from my friend the rabbit.

Figure 2. Samples of Lillian's Reading in April of First Grade

Peter

Peter is an out-going, cooperative, Caucasian boy with a sense of humor and direct way of sharing his thoughts and feelings. He lives with his parents, older sister who was in the school's gifted program, and younger brother. Peter's brother has a medical condition that has required several extended hospital stays and close constant monitoring

by Peter's parents. Peter's parents are concerned with and actively involved in their children's learning and education. They read regularly to the children and Peter's mother helps frequently with such things as holiday parties at school. In kindergarten, Peter had some difficulties, his mother stated, such as remembering letters and sounds. His kindergarten teacher had wanted to retain him but his parents were unwilling to consider that. From our initial experiences with Peter, we noted that he demonstrated knowledge of language and proficiently orchestrated the language cueing systems. Like Lillian, Peter too revealed "phonological awareness," "alphabetic coding" in reading, writing, and speech, and "phonemic segmentation," which some researchers believe are prerequisites to reading (Snow et al., 1998; Stanovich, 1994; Yopp, 1995).

When we began working with Peter, he was highly motivated and eager to be a reader and writer, but convinced and certain he was not one yet. As we walked from his classroom to our first meeting and he learned we were forming a Reading Club, he promptly responded, "But I don't know how to read!" and reminded us of that numerous times that session and over the next several weeks. His lack of confidence and perception of himself as not being literate revealed his literate identity was tenuous. Peter was reluctant to take risks, but with support and encouragement he could usually be convinced to try.

After hearing *Dog Breath* (Pilkey, 1994) in our first session, for example, Peter drew a colorful and detailed picture of the robbers in the house. When asked to write something about his picture, he replied, "What do you mean write? I told you I don't know how to read." Eventually, after much reassurance, he invented a spelling for "robbers" as "CABC." When we complimented him on his writing, he replied, "I spelled robbers? I just wrote robbers? I tried. I really did!" While our first session was an opportunity for Peter to gain confidence and strengthen his literate identity as a reader and writer, the experience did not instantly transform him and his perceptions of himself.

In the weeks to come, Peter's concern with knowing the "right" word or letter and how to read or spell "correctly" was evident in frequent comments such as "I don't know how to read" or "I can't" or "Just tell me." Nevertheless, he continued to talk openly about his intense desire to be a reader and writer and participated fully and cooperatively in the sessions. Evidence of Peter's strengths and knowledge about language, reading, and writing appeared immediately and continuously. We found that he:

- Read environmental print and used it to compose his own "I Can Read" book

- Pointed out specific words in texts, such as "day" and "web" as he listened to *The Very Busy Spider* (Carle, 1984)
- Used picture cues while reading
- Integrated language cues and reading strategies in building on the pattern of a predictable book to make appropriate predictions as he read
- Used words he knew and his knowledge and experience with the pattern to begin coordinating his voice and the print while reading, sometimes rereading to practice this tracking
- Used invented spelling (e.g., "MI" for "my"; "sPidr yB" for "spider web")
- Heard similarities in the sounds of words (e.g., "Hey, Kory [another child in the Reading Club] and hungry sound the same!")
- Noticed the length of words (e.g., "Boy, 'purple' is a long word!")
- Used visual cues he remembered in his writing (e.g., "How do you make a <z>? Oh, yeah, it's a zigzag.")
- Made intercontextual connections by, for example, getting excited when he realized the "Happy" he was writing for "Happy Meal" was the same as that in the familiar "Happy Birthday."

Statements such as "I think I can read," "I did it all by myself," "I'll help you," and "I just learned" began replacing his earlier less confident statements and were evidence that his literate identity was growing.

Examples of Peter's reading in the fall are in Figure 3. Peter was inventing and learning to integrate graphophonic cues with his knowledge of syntax and semantics. The miscues he made reveal his concern for constructing meaning and having his reading sound like language

From *One Bee Got on the Bus* (Dennis, 1996)

(1) Four butterflies are going got on the bus.

(2) Three bats are going got on the bus.

From *Rain* (Kalan, 1978)

(3) Rain is on the purple flowers

(4) Rain is on the white house

(5) Rain is on the green trees

Figure 3. Samples of Peter's Reading in the Fall of First Grade

and make sense. He shifted from past tense to present (lines 1 & 2) and made phrases into sentences (lines 3, 4, and 5). His omission of "green" on line 5 did not have a major effect on the meaning. When we discussed Peter and his reading, writing, and strengths with Miss L., however, we often felt like we were discussing two different children with her. Her comments consistently focused on what Peter did not know that she thought he should and how he wasn't "retaining" much from his work in the classroom.

By January, Peter's confidence, knowledge, and strengths had grown and, while shades of doubt and an overfocus on print (e.g., reading "the" then changing the pronunciation to "t-uh") occasionally appeared, his literate identity as a reader and writer was evident. He was self-assured and proud of himself and the reader and writer he was becoming. Immersing Peter in predictable books, writing his own books, listening to and discussing stories read to him, etc., was helping him to refine his reading and writing inventions, and confidently to perceive and identify himself as the reader and writer he was.

In mid-January, as Peter was heading back to his classroom after reading *Cookie's Week* (Ward, 1988) and eagerly drafting his own story following that book's pattern ("My Cats' Week"), we called him over and asked:

Prisca: Peter, do you remember what you told me the first time you came here?

Peter: (giggling) Yes, that I couldn't read.

Prisca: Yes, and I said, "Yes, you can" and look at this! Look at how well you do!

Peter grinned and called out "See you later, Alligator" as he reentered his classroom.

Moments later, we observed Peter reading a book to the paraprofessional at a table outside the classroom while she listened and took a running record on his reading. Peter stumbled over words and painfully and laboriously worked to sound out what he did not know. When he finished the book, he hung his head and mumbled that he could not read. The paraprofessional pointed out to him the words he missed and reassured him that he could read.

By the end of January, Peter's behavior, enthusiasm, and confidence revealed his literate identity as a reader and writer was changing in dramatic ways. He generally completed his classroom work, sometimes successfully as with studying spelling words, but at home, in the classroom, and in the Reading Club he became easily and gradually more frustrated and overwhelmed by the print on the page of a book. During

our sessions he made disruptive noises, did not pay attention, disturbed others, and made numerous comments like "I'm stupid," "I suck," "I'm too tired," "I goofed up," "I'm a dumb-dumb," and "I don't want to do this." As he read, he often over-focused on print at the expense of meaning (e.g., reading "yellow" for "yelled" or "not" for "no"). When he did correct, we pointed out the knowledge, strengths, and strategies he was demonstrating, but he dismissed us with statements like "But I skipped these two [words]," "I goofed up," "I read bad because I didn't sound them out and I wasn't thinking!" or "I'm not a good reader because I can only read when I'm woke up."

Despite these changes, we continued to see Peter's strengths grow throughout the spring: he used more conventional spellings when he wrote, refined his invented spellings, integrated his background knowledge and experience into his reading, tracked while he read, and discussed aspects of writing such as spacing and quotation marks. However, he seemed unable to see, appreciate, and value his strengths himself.

Figure 4 provides a sample of Peter's reading in April. Following standard miscue analysis procedures (Goodman et al., 1987), Peter read the story without assistance so we could examine his strategies. He predicted and self-corrected (lines 2, 4, and 8) to make meaning. He also

From *The Ball Game* (Packard, 1993)

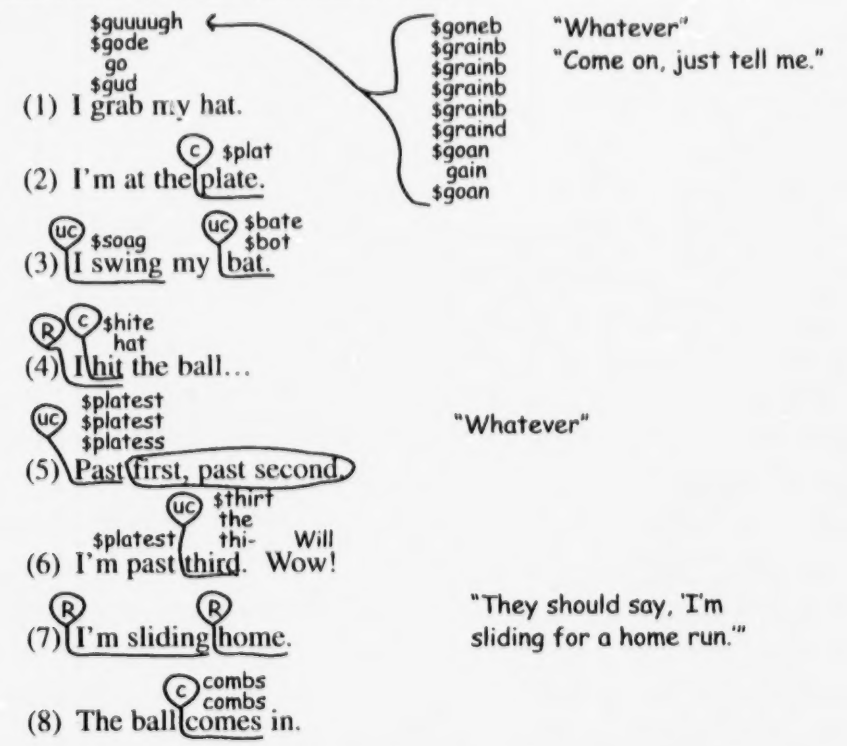

Figure 4. Samples from Peter's Reading in April of First Grade

drew on his own knowledge of language and baseball to comment on how he thought the text should read (line 7). Peter's focus on words and sounding out, though, was evident. Numerous attempts to sound out and continuing when his reading didn't make sense (lines 1, 3, 5, and 6) as well as his "whatever" attitude (lines 1 and 5) revealed the limited strategies he had for solving difficulties and a lack of investment in and concern for meaning. His reading here stands in stark contrast to his reading, use of strategies, focus on meaning, enthusiasm, and confidence in the fall.

Miss L. wanted to retain Peter in first grade but his parents would not agree. His difficulties continued in second grade and he was recommended for testing.

Discussion

As we reflect on our year with Lillian and Peter, we find ourselves pondering the anomalies of our encounters with them and their literacy development. The experience gave us a much deeper understanding of the role of context in literacy events as it contributes to a reader's literate identity. This insight leaves us feeling a little like we were misguided missionaries, with very simplistic and naïve notions about our potential to keep children like Lillian and Peter from falling through the cracks. Readers invent themselves and their literate identities as they invent reading, in the contexts of the literacy events in which they participate. And even though different contexts rooted in different theoretical perspectives have the identical goal of empowering children to become confident and proficient readers and writers, the readers must negotiate and make sense of all these contexts and underlying "texts" to invent their literate identities.

Studies of the contexts in which children read usually examine social, affective, cognitive, and physical factors (McIntyre, 1992) and those factors represented our initial perceptions and understandings of context, the Reading Club and the classroom existing as two separate and distinct contexts. The Reading Club was in an area outside the classroom, where Lillian and Peter interacted not only with each other but also with children in the Club from other first grade classrooms as well as with us. The expectations in the Reading Club were quite different from those in the classroom. In the classroom, instruction and independent work focused on accuracy, words, letters, and sounds; children completed worksheets on skills and raised their hands to speak. In contrast, the Reading Club focused on integrating a variety of language

cues and cognitive strategies for making literacy meaningful. The children wrote and published their own stories, were supported in reading predictable books, and spoke freely to each other and to us about books, their stories, and their lives. They were encouraged to take risks, regarded as successful readers and writers, and praised for their performance.

When Lillian and Peter physically left their classroom to come to the Reading Club, we thought they could disconnect from their classroom context that positioned them as unsuccessful readers and writers. We knew they would "bring with them" their classroom understandings of reading but believed that experiences with meaning making strategies and their sense of self-efficacy in our context would allow them to become successful readers in the classroom context as well. We have come to appreciate, however, that context issues are not that neat and tidy. Supplementary programs, such as the Reading Club, that provide opportunities for children to be readers and writers who integrate strategies to predict and construct meaning may not be able to compensate for classroom experiences that focus the children on accuracy and skills.

Recent research (Martens et al., 1999) on intercontextuality is documenting the critical role of "texts" and contexts in literacy development. Lillian and Peter taught us, in a very real way, how powerful, implicit, and "unavoidable" the connections between texts and contexts are. We see now, the children did not come to the Reading Club "context-free" of classroom "texts." McIntyre (1992) suggests that reading is context-specific, that is, what children learn in one context does not necessarily "transfer" to another context. In the fall, that may have been true for Lillian and Peter, allowing them to experience success in the Reading Club even though they were struggling in the classroom. But the evidence they were gathering from the classroom texts and context after January became the scripts they brought, "read," and followed in the Reading Club context.

Halliday & Hasan (1985) state that the previous texts of language users are mistakenly taken for granted.

> School provides very clear examples. Every lesson is built on the assumption of earlier lessons in which topics have been explored, concepts agreed upon and defined; but beyond this there is a great deal of unspoken cross-reference of which everyone is largely unaware. This kind of intertextuality includes not only the more obviously experiential features that make up the context of the lesson but also other aspects of meaning. (p. 47)

Lillian and Peter drew on all of these "texts" to invent their literate identities through their personal and social experiences and relationships. There was tension, however, in the mixed messages they received across these texts and contexts, messages that positioned them alternately as successful readers or failing readers. And ultimately, while surely unintended by Miss L, whose authority Lillian and Peter regarded most, their sense of failure prevailed.

Knowing this now, we wonder what we could have done differently to better support Lillian and Peter. We are not sure, except to think we might have worked more closely with Miss L. While we had the luxury of providing literacy experiences we believed supported these struggling readers without feeling the pressure of test scores and mandates, Miss L. did not. We wonder if we could have helped to free her from a curriculum that disadvantaged at least two of her students, and disempowered her as a teacher. We see that, not only do "texts teach" (Meek, 1988), but that transactions with texts teach across texts and contexts (Martens et al., 1999). The need for contexts in which young children can be successful as readers, contexts in which they are supported in constructing meaning as they invent reading, is critical, as children also invent their literate identities. It is from these fragile identities that a reader is made and, sadly, sometimes broken.

Notes

Following are miscue analysis markings used in the text excerpts: substitutions are written above the text; omissions are circled; insertions are indicated with a caret; $ indicates a non-word; P indicates at least a five-second pause; a circle connected to a line(s) under a portion of the text marks a regression and the letter(s) in the circle indicates what occurred; C indicates the miscue was corrected; R indicates a straight repetition of the text; UC means an unsuccessful attempt was made to correct the miscue.

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Teacher Leadership: A Key Factor in Reading Recovery's Success

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Abstract

The problem of sustaining an innovation is a reality in many schools because of changes in personnel and the multiplicity of options for innovation from internal and external sources. Reading Recovery, an early literacy intervention program, has a record of fifteen years of staying power in school districts across the United States. This study was designed to explore the role of the teacher leader as the central figure in the successful adoption, implementation, and institutionalization of Reading Recovery as an innovation in an educational setting.

Both descriptive quantitative and qualitative research approaches were used to gather data from teacher leaders regarding their behaviors, attitudes, and perceptions in implementing their role. These data were analyzed using the theoretical framework of teacher leader as change agent in the innovation process.

The data indicate that teacher leaders routinely engage in activities and behaviors that are identified in the literature as supporting the introduction and sustained implementation of an innovation. Teacher leaders participate with the system in (a) developing a sense of need for change, (b) establishing an information-exchange relationship around ways to address that need, (c) diagnosing problems and considering how Reading Recovery could intervene to solve them, (d) creating an intent to change, and (e) translating that intent into action. Teacher leaders work to stabilize and sustain the implementation by

developing ongoing support, establishing credibility, collaborating with decision-makers and opinion leaders, demonstrating and evaluating the effectiveness of Reading Recovery, and maintaining the quality of the implementation.

The study provides evidence that the role of the teacher leader is complex and requires integration and operationalization of a wide and diverse range of approaches to insure the effective implementation of Reading Recovery. The role of the Reading Recovery teacher leader serves as an exemplar from which others interested in educational reform can learn.

Introduction

Characteristics of Educational Reform

Educational reform is essential because of the fundamental change in the American economy from an industrial base to an information-knowledge base. This change creates the need for a different kind of education provided by a different kind of educational system. Nobel laureate Kenneth G. Wilson believes that "Americans, including those now graduating from school, simply are not educated to sustain middle-class incomes in an economy and society based in knowledge, driven by information, and defined by change" (Wilson & Daviss, 1994, pp. 1-2). Other researchers and societal observers amplify Wilson and Daviss' perspective in describing the state of affairs of America's educational system and its challenges in the 21st century (Allington, 1995; Atkinson & Jackson, 1992; Hinds, 1999; National Research Council, 1999) The history of change initiatives to address past and present problems is well-documented (Evans, 1996; Goodlad, 1984).

The key to reform is a change design that works. According to Askew, Fountas, Lyons, Pinnell, and Schmitt (1998), when innovations [reforms] are introduced into an educational system, one of three things is likely to happen:

- Because of the difficulties involved in change, the educational innovation is adopted but is rejected before a true test is made.
- The innovation is adopted in a half-hearted way so that the characteristics that provided the benefit are "watered down" or eliminated altogether.
- The innovation is adopted but after a short time is, itself, changed so that the system is accommodated. (p. 15)

To avoid such results and to achieve institutionalization of an innovation, Clay (1994b) cites Dalin suggesting that innovation requires a "pedagogical plan to support the innovation so that the system learns what is required and how to get it into place" (p.124). Clay also emphasizes that the innovation "must be insistent, persistent, and sustained over continued crises" or the system will be transformed back to its old practices (p. 127). According to Clay there is a strategic balance that systems require in order to maintain themselves.

Strong leadership is essential to successful reform and leaders are considered "change agents." Rogers (1995) defines change agent as "an individual who influences clients' innovation decisions in a direction deemed desirable by a change agency" (p. 335). Key to this role is the function of "linker" – facilitating "the flow of innovations from a change agency to an audience of clients" (p. 336). The change agent's role can include seven steps in relation to the innovation: developing a need for change, establishing an information exchange relationship, diagnosing problems, creating an intent in the client to change, translating intent into action, stabilizing adoption and preventing discontinuance of the innovation, and achieving a terminal relationship in which the innovation is self-renewing (p. 337). Factors in the change agent's success include communication, timing, orientation in relation to client, compatibility of the innovation with the client's needs, empathy with the client, similarity with the client, involvement of opinion leaders, the client's evaluative abilities, and the nature of the diffusion process — whether it is centralized or decentralized (pp. 336-370).

There are many models of reform but "the difficulty comes, it seems, in transporting these practices from the sites where they are invented and demonstrated to other sites. The history of education is replete with examples of successful experiments that are abandoned after they proved their worth. In business this is referred to as the problem of 'going to scale'" (Schlechty, 1997, p. 83). Scaling means that an innovation can be expanded into multiple implementation sites of varying sizes and settings – small, medium, and large districts, urban, suburban, and rural districts. A variety of factors influence the scalability of an innovation. These include clarity of purpose, school buy-in, district commitment, strong leadership, training and support, sense of connectedness, quality control (Olson, 1994; Stringfield in Olson, 1994), and continuous improvement and redesign (Wilson & Daviss, 1994).

Reading Recovery as an Example of Innovation

An educational innovation that has been considered "one of the most successful educational reforms to appear in U.S. schools—one thoroughly grounded in the process of redesign" (Wilson & Daviss, 1994) is Reading Recovery. Reading Recovery is a short-term, early intervention tutoring program for first-grade students who are at the lowest level of achievement in reading and writing in their classrooms. The intervention includes thirty-minute, daily lessons for up to 20 weeks. The purpose of Reading Recovery is to accelerate children's learning to enable them to catch up with their average-achieving peers and to sustain their own learning as they benefit from regular classroom instruction.

The design of Reading Recovery is intended to achieve the results expected by the host system in order to foster institutionalization. The design provides for a pedagogical plan for implementation that includes key personnel (teacher leader and site coordinator in particular) with responsibility for helping the system learn what is needed to implement Reading Recovery. The plan is sustained over time by the efforts of the teacher leader and his or her colleagues as they work to balance the vital processes existing in the system with the changes required for a successful implementation of Reading Recovery.

The factors influencing the scalability of an innovation mentioned above are also included in the design of this early intervention program. In Reading Recovery, looking at results and making modifications means looking at two fundamental questions: (a) Are enough children being served with results that demonstrate that the children are getting "discontinued;" that is, reading and writing at a level that is within the average band of their respective classes and demonstrating a self-extending system that will enable them to continue to be successful in their classroom program? and (b) Is Reading Recovery meeting its one clear goal: "...to dramatically reduce the number of learners who have extreme difficulty with literacy learning and the cost of those learners to educational systems" (Clay, 1994a)?

Clay (1994b) has identified the teacher leader as playing a key role in the scaling up of the program. Reading Recovery's three-tier "trainer of trainers" model creates what Clay (building upon Goodlad, 1984) describes as a "redirecting system." The model provides for professionals with specific roles at the university, school system, and school level to collaborate to support the educational innovation.

Clay (1994b) describes five key points that characterize the teacher leader role in Reading Recovery:

- A full year of training provides teacher leaders with an understanding of the changes that occur over the year of training in Reading Recovery teachers.
- Teacher leaders "test practice against theory" in their work with children and teachers.
- Teacher leaders collaborate with teachers in assisting and guiding them in their efforts to teach the lowest achieving children.
- Teacher leaders develop understanding and thorough knowledge of the program in the educational system in which it occurs.
- Teacher leaders in training observe other teacher leaders and teachers and practice their own skills throughout their year of training and their ongoing professional development. (p. 126)

In essence then, teacher leaders are change agents, as described above by Rogers (1995). The teacher leaders function as a "redirecting system" as they "teach children, train teachers, educate the local educators, negotiate the implementation of the program, act as advocates for whatever cannot be compromised in the interests of effective results, and talk to the public and the media, correcting misconceptions" (Clay, 1994b, p. 127).

Purpose of the Study

Any effort to implement reform or innovation in education or in other systems requires the key element of leadership. Leadership may come from the change agent or from another individual involved in the change process. Whichever the case may be, and it is likely to be a combination of leadership from many sources, there is much to learn from studying the leadership role in the scaling up of reform designs and innovations. Reading Recovery represents an ideal setting in which to study the role of the key individuals who serve in the role of teacher leader.

The purpose of this study was to examine the role of teacher leader in the implementation of Reading Recovery as an educational innovation. Of interest is what teacher leaders do to move the implementation of Reading Recovery from adoption to "full implementation," meaning there are enough teaching slots available to meet the identified need for Reading Recovery.

Since Reading Recovery is deemed to have an impact on the culture and operation of schools, the role of the teacher leader as a change agent is explored with regard to the relationships that are created and the strategies that are employed by the teacher leader in support of Reading Recovery implementation.

Specifically, the two fundamental research questions were: What do teacher leaders say they do to make scaling up of an educational innovation effective? What is the profile of the teacher leader who successfully leads the scaling up of Reading Recovery at his or her site?

Theoretical Frameworks for Exploring Innovation

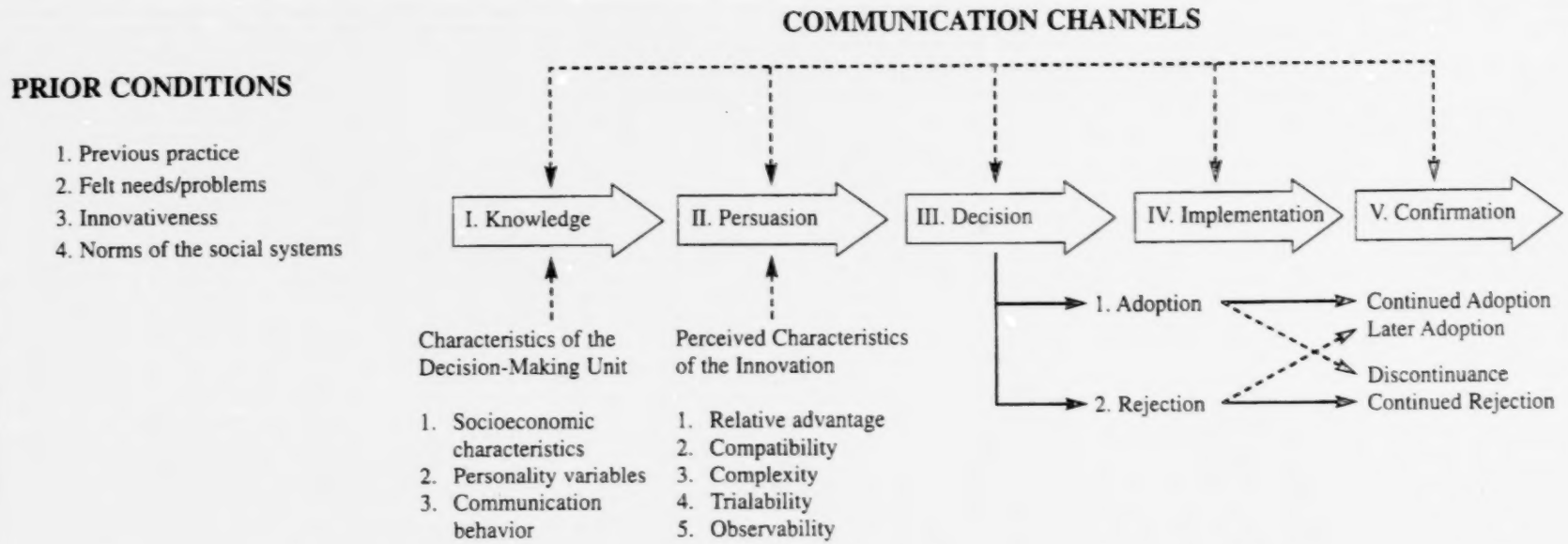
Three basic approaches for consideration of the process of innovation in organizations emerge from the research literature. The first is the *traditional theoretical approach to innovation* (Rogers, 1995), which serves as the framework that anchors this study. Rogers' theory is based on highly personalized interactions within a social system to influence the adoption and confirmation or rejection of innovations. Innovations must be compatible with the belief structures within the social system. Opinion leaders, authorities, and change agents all influence the adoption and confirmation process. The change agent, in this study the teacher leader, must operate in a delicately balanced manner to represent the innovation in such a way as to gain confidence and credibility from the adopters and to support the implementation of the innovation with faithfulness to the innovation and respect for the host system. Figure 1 outlines Rogers' model of the "Innovation-Decision Process." Figure 2 presents Rogers' model of the "Five Stages in the Innovation Process in an Organization."

Other researchers (e.g., Huberman & Miles, 1984; Levine, 1980; Sarason, 1971) acknowledge fundamental elements of the innovation process. One involves the steps of recognizing the need, formulating a plan to meet the need, initiating and implementing the plan, and institutionalizing or terminating the innovation. Another element is the highly interactional nature of the innovation process particularly with regard to contextual antecedents, interpersonal relationships, past practices, and perceived "fit" with individual and organizational interests. The third element is the complexity of the innovation process and the impact variation that occurs from one individual to another and the resulting decisions that are made within the social context. Finally, the fourth element is the critical role of the change agent in understanding the context and the individual perspectives during the change process.

The *"cookbook"* or *"how-to" approaches to organizational change* appear to be growing out of recent federal initiatives toward school reform (e.g., Bodilly, 1996, 1998; Bowman, 1999; Cawelti, 1999; Educational Research Service, 1998; Education Funding Research Council, 1999; Hayes, Grippe, & Hall, 1999; Herman & Stringfield,

415

A Model of the Stages in the Innovation-Decision Process

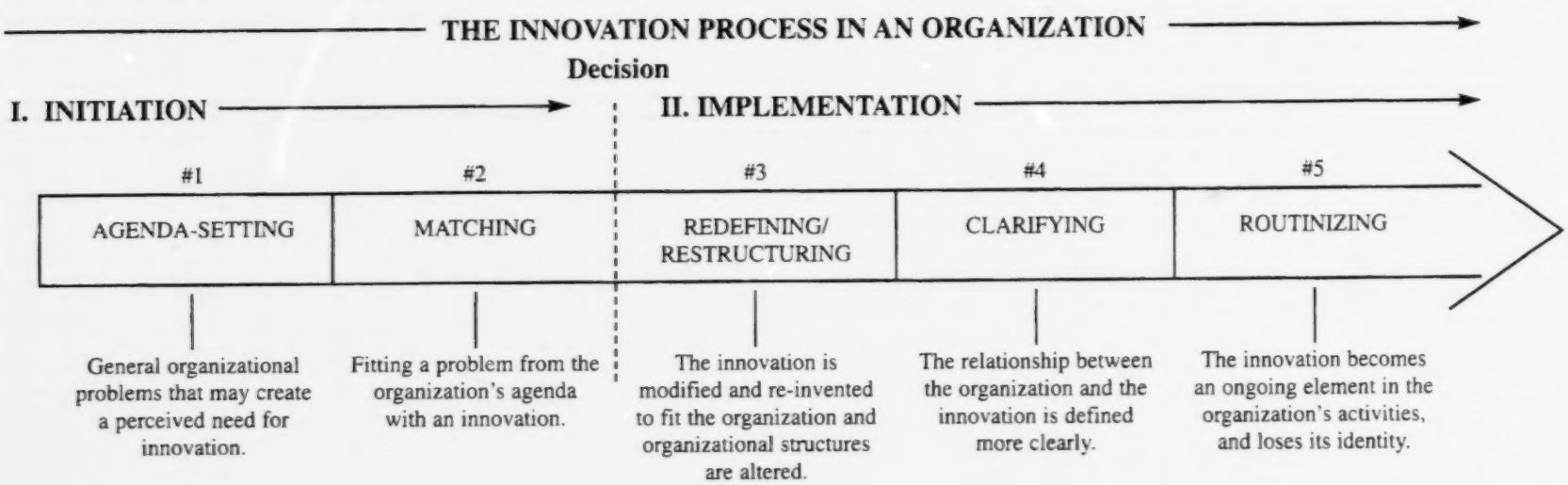


The innovation-decision process is the process through which an individual (or other decision-making unit) passes from first knowledge of an innovation to forming an attitude toward the innovation, to a decision to adopt or reject, to implementation of the new idea, and to confirmation of this decision. (Rogers, 1995, p. 163)

Figure 1. Rogers' Model of the Innovation-Decision Process

Note. From *Diffusion of Innovations* by E. M. Rogers, 1995, New York: The Free Press.

Five Stages in the Innovation Process in an Organization


THE INNOVATION PROCESS IN AN ORGANIZATION
Decision
I. INITIATION
II. IMPLEMENTATION
#1
#2
#3
#4
#5
AGENDA-SETTING
MATCHING
REDEFINING/ RESTRUCTURING
CLARIFYING
ROUTINIZING
General organizational problems that may create a perceived need for innovation.
Fitting a problem from the organization's agenda with an innovation.
The innovation is modified and re-invented to fit the organization and organizational structures are altered.
The relationship between the organization and the innovation is defined more clearly.
The innovation becomes an ongoing element in the organization's activities, and loses its identity.

The innovation process in an organization consists of two broad activities: (1) *initiation*, defined as all of the information gathering, conceptualizing, and planning for the adoption of an innovation, leading up to the decision to adopt, and (2) *implementation*, all of the events, actions, and decisions involved in putting an innovation into use. The decision to adopt (shown as a vertical dotted line in the figure above) divides initiation, composed of agenda-setting and matching stages from implementation, composed of the three stages of redefining/restructuring, clarifying, and routinizing. (Rogers, 1995, p. 392)

Figure 2. Rogers' Five Stages in the Innovation Process in an Organization

Note. From *Diffusion of Innovations* by E. M. Rogers, 1995, New York: The Free Press.

1997; Horsley & Kaser, 1999). While not all of the suggestions from these approaches seem relevant here, several contribute to the discussion of innovation and school reform in positive ways:

- Time is needed to decide upon the specific innovation desired.
- External factors play an important role in selection of the innovation.
- Time is needed to develop and implement the selected innovation.
- Involvement of all individuals who are affected by the innovation is essential.
- Constant communication and information flow is essential.
- Risk taking must be encouraged and supported.
- The design selected must be consistent with organizational practices and instructional approaches.
- Clarity of vision about the design and its fit with the school is essential.
- Leaders must provide initial and ongoing support, but consensus building about the vision is important to sustain the innovation in the face of changes in leadership.
- Cultural alignment and revision of the infrastructure may be needed to support the innovation on an ongoing basis.
- A stable environment supports durability of the innovation.
- Technical support, professional development, and ongoing networks of support are essential for successful institutionalization of an innovation.
- Accountability must balance patience and progress, particularly early in the innovation adoption process.

The *human side of change theories* emphasize the impact of change on the individual and view the individual as the only or key element of hope for school reform. Hargreaves (1997) views teaching and school reform as emotional work, driven by moral purpose, and creating the day-to-day foundation for school change. Fullan (1997) identifies the new messages about supporting change as follows: Have good ideas, but listen with empathy. Create time and mechanisms for personal and group reflection. Allow intuition and emotion a respected role. Work on improving relationships. Realize that hope, especially in the face of frustrations, is the last healthy virtue. Evans (1996) describes the change process as one of loss and grief that moves from there to a new commitment, new competencies, new coherence, and consensus about the value of the change. Goodlad (1984) describes the relationship between the teacher and the student as the bridge of relationships that makes the school effective in its mission. These three approaches to the process of innovation in organizations provide impetus to the study of teacher

leaders as change agents in the implementation of Reading Recovery in educational systems. Each approach emphasizes the important role of leadership in initiating and sustaining the innovation. Hence, each provides critical context for the study presented here.

Methodology

Both qualitative and quantitative approaches were used to explore the role of teacher leader in the implementation of Reading Recovery as an educational innovation. A questionnaire was developed based largely upon Rogers' (1995) theory of diffusion of an innovation, including the role of the change agent in the innovation process. In addition, in-depth interviews were conducted with nineteen questionnaire respondents in order to develop a richer perspective regarding the questionnaire responses.

Survey Questionnaire

Using Rogers' theory and supplementing it with other findings from the literature review and from a review of the syllabi from seven university training centers for teacher leaders, a questionnaire (see Appendix) was designed to collect data from the entire population of teacher leaders ($N = 756$). A pilot survey of teacher leaders ($N = 17$) was conducted prior to the full administration of the survey. As a result, instructions for completing the questionnaire were revised and one question was eliminated. The revised questionnaire was administered at the 1999 Teacher Leader Institute (early June) so that all teacher leaders would be available to participate. Survey responses were obtained from 154 teacher leaders during this process. In addition, following the Teacher Leader Institute, the questionnaire was mailed to all teacher leaders who had not completed the survey at the Institute ($n = 588$). An additional 91 surveys were obtained through this mechanism. A total of 262 surveys were obtained for a response rate of 35%.

The purpose of the survey was to collect data from teacher leaders regarding perceptions of their role and the environmental factors that affect it in the scaling up of Reading Recovery. Particular attention was given to those factors that characterize the change agent's role in the adoption and implementation of an educational innovation. In addition, attention was given to those factors that teacher leaders identified as contributing to the full implementation of Reading Recovery and to the teacher leader role in that implementation. The questionnaire was developed in collaboration with several teacher leaders and university trainers who agreed to assist in the development process.

The questions were divided into two groups. The first group involved questions regarding the teacher leader's involvement in the adoption of Reading Recovery. Since frequently teacher leaders have had limited involvement in the adoption phase, these questions were placed at the back of the questionnaire document and printed on a different color of paper so that teacher leaders could easily distinguish between the two sections of the questionnaire. The second group of questions was presented at the front of the questionnaire since all teacher leaders are by definition involved in the implementation process and all respondents were requested to complete this section.

The questionnaire consisted of twenty-two questions including five on the adoption of Reading Recovery (the first group described above). Four questions were open-ended and provided opportunity for participants to respond in any way they wished. The remaining questions provided a list of responses and asked the respondents to check their preferred response on a scale of zero to ten or a scale of zero to five. These questions also provided an option of "Other," which the respondent was asked to specify and rank.

Teacher Leader Interviews

The purpose of the in-depth interviews was twofold: (a) to assess the relationship of the theories examined in the literature review to actual experience of teacher leaders, and (b) to provide grounding for further analysis of the questionnaire results. The in-depth interviews were conducted using a semi-structured format with questions providing for open-ended responses. These interviews solicited a broad range of information from the teacher leaders regarding how they see their role in the scaling up of Reading Recovery.

The process used for selecting the teacher leaders for the interviews was to inquire among all the university trainers for their recommendations regarding teacher leaders who have been successful in full implementation of Reading Recovery at their respective sites. Forty-five teacher leaders were identified in this process. A second request to trainers asked for names of teacher leaders who had struggled greatly in the implementation process. Fourteen teacher leaders were named in this round. From the names suggested by the trainers, those teacher leaders who had not responded to the questionnaire were eliminated. Additional teacher leaders were eliminated who were from the same state or geographic region in a state. As a result of this process, 19 teacher leaders were interviewed. Of these, two were identified as having struggled greatly with the implementation process.

Results

The 262 respondents to the questionnaire reflected a very uniform sample of teacher leaders. The respondents were predominantly white women with English as their native language, educated at the post-masters degree level, with many years of experience in education (21+ years), and extensive experience in Reading Recovery (5+ years). Most teacher leaders (77%) had served at only one Reading Recovery site, and fewer than half of the teacher leaders (40%) had been involved in the adoption of Reading Recovery at their site. Table 1 includes the levels of experience of the teacher leader respondents and Table 2 presents a summary of their characteristics.

Table 1. Levels of Experience of Teacher Leader Respondents

	N	Lowest	Highest	Mean	S D
Years of Employment in Education	262	2	46	21.8	7.32
Years in Reading Recovery	262	1	14	5.77	2.70

Table 2. Summary of Characteristics of Teacher Leader Respondents

Characteristic	N	%
Source	17 Pilot 154 Institute 91 Mail	6.5 Pilot 58.8 Institute 34.7 Mail
Gender	9 Male 253 Female	3.0 Male 97.0 Female
Ethnicity	9 Black 12 Hispanic 241 White/Pacific Islander	3.4 Black 4.6 Hispanic 92.0 White/Pacific Islander
Education	7 Bachelors 37 Masters + 18 Doctorate	2.7 Bachelors 90.5 Masters + 6.8 Doctorate
RR/DLL Training	246 RR only 16 RR/DLL 0 DLL only	93.8 RR only 6.2 RR/DLL 0 DLL only
Status	252 Trained/Active 5 Trained/Returning 5 Training/Completed	96.0 Trained/Active 2.0 Trained/Returning 2.0 Training/Completed
Number of Sites Served	200 One 36 Two 26 Three or more	77.0 One 14.0 Two 9.0 Three or more
Involved in Adoption	105 Yes 157 No	40.0 Yes 60.0 No

According to questionnaire responses, the teacher leaders' reported behaviors present a picture that is very positively skewed toward activities that are deemed in the literature to promote the implementation of an educational innovation. For example, on all the behavioral questions, teacher leaders reported their behaviors include frequent use of strategies designed to develop ongoing support for Reading Recovery implementation, to establish their credibility and trustworthiness in relation to others in the implementation of the program, to work with opinion leaders toward full implementation, to demonstrate the effectiveness of Reading Recovery, to assist the site in evaluating its effectiveness, and to maintain the quality of the implementation in relation to the Standards and Guidelines of the Reading Recovery Council of North America.

On the behavioral questions related to teacher leader involvement in the process of adoption of Reading Recovery at their sites, the teacher leaders also reported they frequently used strategies designed to promote the adoption of Reading Recovery as an educational innovation. During the adoption process, teacher leaders were involved in the process, established rapport with the schools, took actions that promoted adoption, worked with decision-makers, and had frequent contact with those decision-makers.

Teacher leaders evaluated the involvement of school related individuals in the implementation of Reading Recovery. They concluded that assistant superintendents, federal program directors, and principals dominated the process and that classroom teachers, superintendents, and school board members were involved to lesser extents. Teacher leaders reported that their contacts with these decision-makers occurred frequently (48.6% at a response of 3 of 5), quite frequently (23.7% at a response of 4 of 5), to very often (9.3% at a response of 5 of 5).

In assessing the barriers to achieving and maintaining full implementation of Reading Recovery, teacher leaders gave a ranking of 10 (a substantial problem) to funding (71% of respondents) as the most substantial problem. This problem is followed by the perceived high cost of the program (44%), large numbers of students who need additional support (25.9%), and political problems in the district (20.6%). In order to address these barriers, teacher leaders report they most often use the following strategies (ranking of 10):

- Explain why a safety net program needs high priority (43.8%)
- Provide information to administrators (40.6%)
- Support classroom program development (40.6%)
- Provide regular reports to decision-makers (40%)

- Explain how Reading Recovery is a part of a comprehensive program (38%)
- Provide in-service training for classroom teachers (38%)
- Document performance of former Reading Recovery students on proficiency tests (32.6%)
- Conduct awareness sessions in the district (30%)

When asked to identify areas in which universities provide support, teacher leaders rated four areas high. University trainers provide relevant and timely professional development sessions, provide updated information about implementation issues, assist with problem solving around issues of compliance with Reading Recovery Standards and Guidelines, and organize Reading Recovery conferences. Teacher leaders reported lower levels of university support in the following areas: (a) supporting and promoting communication and networking among Reading Recovery teachers and teacher leaders associated with the center, (b) assisting with problems related to teaching the most difficult to accelerate children, and (c) meeting with school officials as needed to discuss implementation issues.

Teacher leaders believe they need additional support from the university training centers. They would like greater advocacy with state and local funding sources and administrators as well as advocacy with administrators and decision-makers. Teacher leaders also perceive that they need assistance from trainers around a wide variety of implementation issues.

The open-ended questions provided the teacher leaders with opportunities to tell their stories in their own words. The responses were rich and reflect the commitments, frustrations, and passions of the teacher leaders. When asked what type of assistance they needed to support the implementation of Reading Recovery at their sites, the teacher leaders responded with implementation issues to be addressed (23.3%), support for administrators and the state for funding (20.2%), advocacy by trainers with administrators and decision-makers (16.8%), opportunities to network with other teacher leaders (2.7%), and development of classroom programs by trainers (1.1%).

Teacher leaders identified factors they believe have contributed to success at their sites. These factors included collaborations outside Reading Recovery (30.9%), advocacy through presentations and reports to decision-makers (23%), the achievement of full implementation as a strategy for seeing the results and maintaining the success (21.8%), teamwork inside Reading Recovery (9.6%), the caliber and commitment of the Reading Recovery teachers (9.1%), and the process of networking with teacher leaders from other sites as well as with administrators (5.6%).

Teacher leaders identified six fundamental areas they considered as their greatest accomplishments or about which they felt the greatest

pride. These areas included their success in implementing Reading Recovery (38.5%), their work with teachers (30.5%), the impact of Reading Recovery beyond itself in the educational system (25.6%), the impact of Reading Recovery on children (21%), their personal and professional development and accomplishments as a teacher leader (9.5%), and their professional relationships (2.3%). [Many teacher leaders gave more than one response to this question.]

Finally, teacher leaders identified the most compelling reason to continue in their roles as teacher leaders, with many offering more than one. Reasons included the children and parents (77.9%), the teachers with whom they work (41.6%), their professional and personal successes and satisfaction (30.9%), and the impact Reading Recovery has on the system (10.7%).

The teacher leader interviews provided for greater depth of information regarding how teacher leaders perceive their role. The interviews confirmed the questionnaire results that serving children and working with teachers are the greatest attractions of the position. In addition the teacher leaders' passion for their work sustained them in times of frustration. Teacher leaders described the stress of their positions and the multiple roles involved as creating incredibly busy work lives that were constantly in need of balancing efforts. The teacher leaders also described the demands on their responsibilities outside Reading Recovery. Nearly every teacher leader who was interviewed had responsibilities in addition to his or her teacher leader role. These additional responsibilities provided access and information that otherwise would be less readily available to Reading Recovery, and these additional responsibilities frequently resulted in greater respect and ongoing support (including funding) for Reading Recovery; however, the additional work created stress and tensions for those teacher leaders who value their performance as teacher leaders most highly.

In summary, the teacher leader respondents are highly motivated and highly committed to the delivery of Reading Recovery services to children. This work occurs through an interpersonal network of trained Reading Recovery professionals working in collaboration with school and district level teachers and administrators. The teacher leaders' reported behaviors align with those considered in the literature to promote the implementation and institutionalization of educational innovations.

Discussion

Teacher leaders operate in a complex role within complex social (educational) systems. The role involves operating as a change agent within an environment of multiple schools and frequently multiple

school districts. The role involves operating in a limbo status generally without administrative authority but always with educational responsibility. The role is dependent upon many different relationships to insure the quality of the implementation through teaching teachers, teaching children, and getting results. In addition, many school districts expect teacher leaders to assume responsibilities for non-Reading Recovery educational functions, further complicating their roles.

Based on the data gathered from the teacher leaders through the questionnaires and the in-depth interviews, Figure 3 illustrates the adaptation of Rogers' (1995) innovation-decision process to a school system's decision-making process in relation to adopting and implementing Reading Recovery as an educational innovation. Figure 4 presents an adaptation of Rogers' model of the five-stages in the innovation process in an organization to the initiation and implementation of Reading Recovery in a school district.

The questionnaire itself was designed to gather information regarding the teacher leaders' behaviors during the seven stages of adoption and implementation of an innovation as defined by Rogers. Figure 5 presents the data describing the Reading Recovery teacher leader as change agent in Rogers' "Sequence of Change Agent Roles." The data are consistent with behavioral strategies for effective initiation and implementation of an educational innovation as gathered from the research literature.

The responsibility for maintaining the quality of the implementation of Reading Recovery places the teacher leader in the nexus between the innovation and the system. To the extent the teacher leader as change agent is perceived to have greater affinity with the school system, the teacher leader is likely to be more effective in insuring the effectiveness of the implementation (Rogers, 1995). In order to assess the teacher leader's perception of affinity to employer (the client) versus to Reading Recovery (the innovation), the questionnaire included two specific questions. In response to the question of "How important is it to you to continue being a Reading Recovery teacher leader?", an astonishing 72.1% of the teacher leaders responded that it is very important (the highest rating). In contrast, in response to the question of "How important is it to you to continue being in your current district for employment?", only 45% of the teacher leaders responded in like manner.

Given the substantial difference in affinity to Reading Recovery (the innovation) in comparison to affinity to current employer (the client or host), and given the stressful nature of the teacher leader position as described by the interviewees, the question arises: Why is there such a

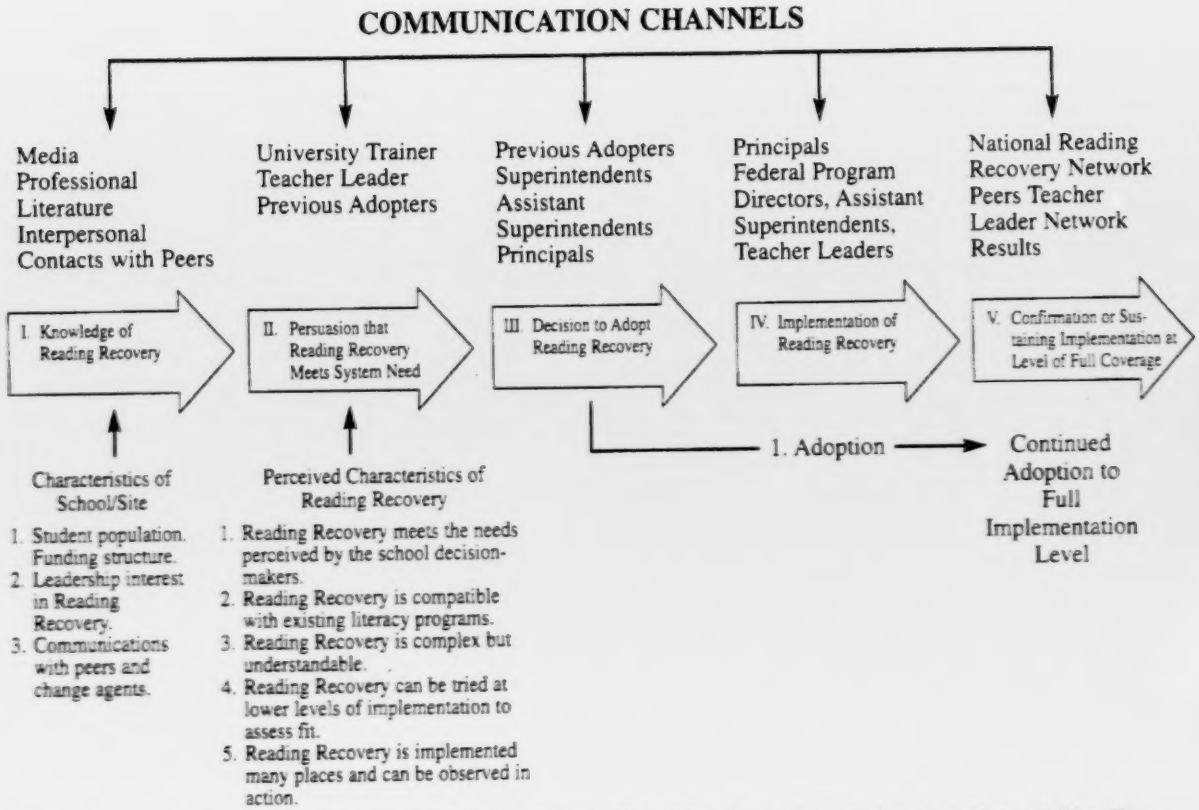

ENVIRONMENTAL CONDITIONS
1. Ineffectiveness of existing programs.
2. Need for effective early literacy programs.
3. Readiness to consider new programs for children with extraordinary needs.
4. Accountability to the public, and funding opportunities.
COMMUNICATION CHANNELS
Media
Professional Literature
Interpersonal Contacts with Peers
University Trainer
Teacher Leader
Previous Adopters
Previous Adopters
Superintendents
Assistant Superintendents
Principals
Principals
Federal Program Directors, Assistant Superintendents, Teacher Leaders
National Reading Recovery Network
Peers Teacher Leader Network
Results
I. Knowledge of Reading Recovery
II. Persuasion that Reading Recovery Meets System Need
III. Decision to Adopt Reading Recovery
IV. Implementation of Reading Recovery
V. Confirmation or Sustaining Implementation at Level of Full Coverage
1. Adoption
Continued Adoption to Full Implementation Level
Characteristics of School/Site
1. Student population. Funding structure.
2. Leadership interest in Reading Recovery.
3. Communications with peers and change agents.
Perceived Characteristics of Reading Recovery
1. Reading Recovery meets the needs perceived by the school decision-makers.
2. Reading Recovery is compatible with existing literacy programs.
3. Reading Recovery is complex but understandable.
4. Reading Recovery can be tried at lower levels of implementation to assess fit.
5. Reading Recovery is implemented many places and can be observed in action.

Figure 3. Adaptation of Rogers' Model of the Innovation-Decision Process As Applied to the Adoption and Implementation of Reading Recovery as an Educational Innovation

I. INITIATION
Decision
II. IMPLEMENTATION
#1
AGENDA-SETTING
#2
MATCHING
#3
REDEFINING/ RESTRUCTURING
#4
CLARIFYING
#5
ROUTINIZING
• Early literacy needs of lowest achieving children are not being met.
• Public demands accountability for schools to insure that children learn to read and write.
• State law establishes success measures for third/fourth grade.
• District leadership sets priority for meeting children's literacy needs.
• New funding sources become available for literacy programs.
• District leadership identifies Reading Recovery as a program that may meet early literacy needs for lowest achieving students.
• District leadership assesses "fit" of Reading Recovery with existing curriculum, organizational priorities, and professional development plans.
• District leadership matches funding sources (existing and potential) to Reading Recovery.
• District adopts Reading Recovery and determines changes needed to accommodate implementation.
• Schools adjust schedules of classrooms, teachers, buildings as needed.
• Schools provide time for initial Reading Recovery teacher training as well as ongoing training.
• District seeks waiver of standard to increase flexibility in implementation.
• District gains understanding of Reading Recovery based on experience, results, ongoing adjustments and restructuring.
• District gains understandings of the cost-benefit of Reading Recovery to the district.
• Reading Recovery is a part of the way things are done in the district.
• Resources are budgeted and expended for full implementation.
• Professional development is a standard component of budget and schedule.
• Defined policies and practices insure full implementation in compliance with Standards and Guidelines for operation of Reading Recovery.

Figure 4. Adaptation of Rogers' Model of the Five Stages in the Innovation Process in an Organization to the Initiation and Implementation of Reading Recovery in a School District

127

INITIATION →

I. Develop a need for change.	II. Establish an Information Exchange Relationship.	III. Diagnose Problems.	IV. Create an Intent in the Client to Change.	V. Translate Intent into Action.
Identified and presented information on Reading Recovery as a solution to early literacy problem.	Created awareness of needs through presentations to others of the information identified about Reading Recovery. Worked first with colleagues who knew me to be credible, competent, and trustworthy. Held awareness sessions for interested individuals in the school system and community. Provided additional information upon request.	Gathered and shared information about Reading Recovery as a possible solution. Presented information about alternatives and why they would not be successful in comparison to Reading Recovery.	Presented information about how everyone who wanted to be involved could be involved. Met with colleagues to persuade them to support adoption. Met with opinion leaders to persuade them to support adoption.	Convinced other school personnel that Reading Recovery could help. Met with additional colleagues and system decision-makers about Reading Recovery. Problem-solved with decision-makers about potential problems they saw in implementing Reading Recovery. Met with decision-makers to encourage them to adopt. Wrote letters of support.

Figure 5. The Reading Recovery Teacher Leader as Change Agent in Rogers' Sequence of Change Agent Roles

(Continued on next page)

IMPLEMENTATION →

VI. Stabilize Adoption and Prevent Discontinuance						VII. Achieve a Terminal Relationship
Developed ongoing support for implementation by: Providing data on student performance. Problem-solving around difficult to teach children. Problem-solving around scheduling lessons. Assisting in building Reading Recovery teams. Communicating promptly. Staying available for consultation to teachers. Making in-service presentations. Serving as a clearinghouse for early literacy information.	Established credibility and trustworthiness by: Listening to needs as expressed by teachers and administrators. Problem-solving around a variety of issues. Providing accurate information. Sharing personal experiences in Reading Recovery. Linking decision-makers with other Reading Recovery implementers. Sharing common interests with decision-makers.	Worked with opinion leaders by: Providing information. Answering questions. Enlisting endorsement for ongoing implementation. Sharing children's success stories. Describing the relationship between Reading Recovery and classroom programs.	Demonstrated effectiveness by: Providing opportunities for observation of lessons and professional development sessions. Providing written materials documenting Reading Recovery success. Providing supporting statements from teachers, parents, and others in other adopting districts. Providing data from the site and comparing it with state and/or national data.	Evaluated effectiveness by: Providing annual site report of progress. Analyzing cost-benefit in relation to retention and referral of comparison groups. Assisting in determination of "full implementation." Providing rationales for Standards and Guidelines. Providing forums for discussion of results at school and district levels.	Maintained the quality of the implementation by: Articulating Standards, Guidelines, and rationales. Providing examples of school or district level decisions that affect quality of implementation. Applying to university training center for one-time waiver of a Standard. Problem-solving a variety of situations to maintain compliance Monitoring quality of implementation and children's programs at school and site level.	Not assessed.

Figure 5. The Reading Recovery Teacher Leader as Change Agent in Rogers' Sequence of Change Agent Roles continued

difference? One hypothesis is that the teacher leaders are teachers at their core, and their motivations for service to children largely exceed their loyalty to any particular employer. The passion and commitment described by teacher leaders in response to the open-ended questions on the questionnaire and in the interviews lend credence to this hypothesis. The theories of the human side of the change process (Evans, 1996; Fullan, 1997; Goodlad, 1984; Hargreaves, 1997) speak to the passion and engagement required of individuals (teachers and administrators) and systems in order to sustain change in an institution. Teacher leaders appear to have such passion and engagement, and their success in implementing and sustaining Reading Recovery is evidence.

Another hypothesis for the differences in allegiance is that the teacher leader's professional and personal development offers such satisfaction that losing that sense of reward for the purposes of ongoing employment in the current district is the less desirable option. Goodlad (1984) speaks to the quality of relationships as indicators of satisfaction. The teacher leaders' descriptions of their professional and personal relationships with colleagues, children, and parents appear to drive the level of satisfaction that teacher leaders obtain from their work in Reading Recovery.

A third hypothesis is that the teacher leaders in many instances are in a position to cross organizational boundaries in order to serve children. In nearly all situations, teacher leaders serve multiple schools. In many situations they serve multiple school districts (in the case of consortia of school districts). This level of service provides teacher leaders with the opportunity to focus beyond one situation (even as they continue to teach individual children) to the bigger picture of service to many children and to many teachers. The role places teacher leaders in the position of helping children regardless of their local organizational affiliation. It also requires teacher leaders to support the ongoing implementation of Reading Recovery in different host systems with attention to the quality and integrity of the implementation in each. Since host systems will attempt to change the innovation to suit their needs, the teacher leader must focus on how to accomplish the implementation while maintaining the quality and integrity of Reading Recovery. This process lends itself to the teacher leader's focusing on his or her role in Reading Recovery (the innovation) rather than in the institution.

The teacher leaders' responses create a profile of the teacher leader as an activist change agent, constantly working for the successful adoption and effective implementation of Reading Recovery as a high quality, results-oriented educational innovation. The behaviors the teacher leaders report create a repertoire of strategies that foster the full imple-

mentation and institutionalization of Reading Recovery so that all children who need assistance have the opportunity to participate.

Not all the behaviors in the repertoire are practiced to the fullest extent, however. Teacher leaders report frequent engagement with teachers and teaching, with providing information and responding to inquiries about Reading Recovery, and with problem solving around issues related to implementation. Teacher leaders appear to have developed a high level of comfort in performing these functions that surround the practice and teaching of Reading Recovery. In contrast, teacher leaders report less frequent involvement in activities that span the administrative structures or place teacher leaders in an advocacy role. For example, teacher leaders are more likely to respond to requests for information than to initiate the creation of reports and analyses such as cost-benefit analyses or analyses of the performance of Reading Recovery children in comparison to non-Reading Recovery children on such factors as retention, referral, and performance on proficiency tests. Although teacher leaders identify that funding is the most substantial barrier to achieving and maintaining full implementation, fewer than half the respondents reported they have submitted applications for funding from non-school sources. In addition, teacher leaders report they were unprepared for the extent of the role of spokesperson for Reading Recovery that the teacher leader position in practice requires of them. Thus, while most teacher leaders report using the full repertoire of strategies to support the implementation of Reading Recovery, there appear to be levels of comfort that differ from one type of strategy to another.

Finally, the teacher leaders' responsibility to practice Reading Recovery as a teacher while also serving as the change agents or "carriers" of the innovation may be one of the sources of success for Reading Recovery. As practitioners, teacher leaders constantly demonstrate their mastery of the practice of the Reading Recovery lesson. Their practice informs their teaching through their constant assessment of the strategies they use as they teach children. This assessment provides insights into teaching children that the teacher leaders can use in helping Reading Recovery teachers be successful in their teaching. Furthermore, the experience of teaching children and teaching teachers provides a solid base from which teacher leaders can address system barriers to the achievement and maintenance of full implementation of Reading Recovery. This experience-based position may add credibility to the teacher leader's role as change agent in securing high quality implementation of Reading Recovery.

Figure 6 presents a graphical description of the complexity of the teacher leader role as described in the preceding paragraphs.

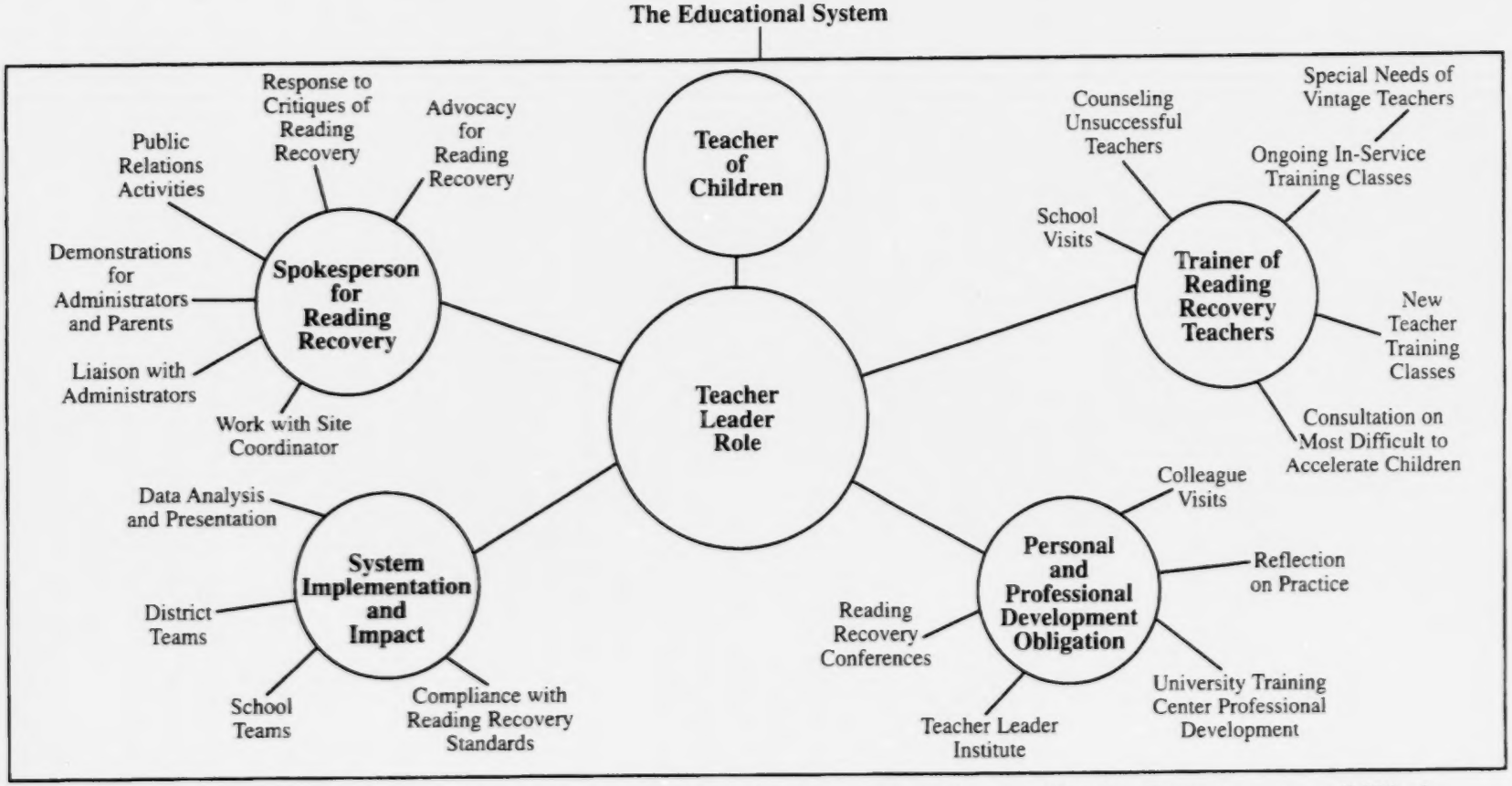


Figure 6. Reading Recovery Teacher Leader Role as Described by Interviewees (Excluding non-Reading Recovery responsibilities).

Implications for Reading Recovery as an Educational Innovation

Prior to addressing the implications of this research for Reading Recovery as an educational innovation, it is important to remind the reader that the research is based on self-reports from teacher leaders who may represent the most vested (as evidenced by the questionnaire return rate of 35%) among the total population of 756 teacher leaders who were eligible to respond to the questionnaire. In addition, the teacher leaders were encouraged to respond because the staff director of the national association for Reading Recovery was the researcher, and the research advisor was one of the founders of Reading Recovery in North America. Accordingly, the results must be interpreted and used with caution. It is possible that teacher leaders who chose not to respond to the questionnaire may have substantially different perspectives and chose not to share them. There is, however, no evidence or other reason to believe that the non-respondents are remarkably different from the respondents.

The results of this research appear to support the continued development of the teacher leader role as change agent in the process of introducing and sustaining Reading Recovery as an educational innovation. The teacher leaders are highly educated and trained as teachers of teachers. Their self-reports of the functions they perform to support the ongoing implementation of Reading Recovery are consistent with the research on change in educational systems. The teacher leaders' detailed reports of their problem solving behaviors provide evidence of their ability to work within systems to meet the needs of children. Teacher leaders build relationships within their sites that are essential to their continuing success. They are passionate about their work and bring a commitment to the innovation of Reading Recovery that exceeds expectations.

In relation to the teacher leader role, respondents identified three areas as critical to the ongoing success of Reading Recovery as an educational innovation. The three areas are role diversity and scope, support, and funding. Each is described below.

In relation to role diversity and scope, the teacher leaders perform a wide range of functions and responsibilities within the defined Reading Recovery role. As the role is implemented in many educational systems, however, teacher leaders also have responsibility for many non-Reading Recovery functions and responsibilities. If Reading Recovery is to continue to grow and succeed in teaching children to learn to read and write, the complexities of the teacher leader role must be addressed by the leadership of Reading Recovery. Some questions to consider are: Must teacher

leaders be solely committed to Reading Recovery? If so, how can Reading Recovery address the issues of resource allocation and return on investment from the perspective of the host systems? If teacher leaders are encouraged to perform non-Reading Recovery functions and responsibilities, what changes would be needed in the Standards and Guidelines for Reading Recovery that govern the role of teacher leader? What options are possible for changing the scope of the teacher leader role without diminishing the effectiveness of the teacher leader as change agent? What are the implications of potential teacher leader role changes for the relationship of Reading Recovery to the host systems?

A second series of questions related to the teacher leader's role as change agent includes such questions as: How can teacher leaders be trained to understand their role as change agent and to assume that role in addition to their role as teacher of teachers and teacher of children? How can the initial training and ongoing professional development for teacher leaders address their responsibilities as change agents and as "public relations" agents?

The second area that appears to be critical for the ongoing success of teacher leaders in implementing Reading Recovery is support. The current Reading Recovery organizational structure vests the primary responsibility for supporting teacher leaders in the university training centers. The teacher leaders have indicated in their responses to the questionnaire that they need additional support from the university training centers in working on issues related to implementation and advocacy at the local level and on networking with other teacher leaders. The university training centers, working through the North American Trainers Group, may wish to address the issue of support available to teacher leaders. The next question, of course, is how will the university training centers be supported to provide additional support to the teacher leaders?

The host systems are also a source of support for the teacher leaders. Many teacher leaders reported strong administrative leadership and advocacy as factors in the success of the Reading Recovery implementation at their sites. Strategies should be developed by Reading Recovery to support the work of administrators and to encourage them to work in support of Reading Recovery. Examples of such support could include materials describing Reading Recovery implementation as a part of comprehensive literacy or school reform programs, networks with other administrators who value Reading Recovery, and conferences and events where administrators can learn from others about Reading Recovery.

The third area that appears to be critical for the ongoing success of teacher leaders in implementing Reading Recovery is funding. Teacher leaders identified funding as the greatest barrier or problem in achieving and maintaining full implementation of Reading Recovery. Suggestions for addressing this barrier include the following:

- Reading Recovery must find new ways to demonstrate its effectiveness as a one-to-one tutorial intervention.
- Reading Recovery must strongly promote its philosophy of service to the lowest achieving children as a value that school districts should embrace in order to meet the needs of all of the children who attend schools in those districts.
- Reading Recovery must find new ways of articulating its role in comprehensive literacy programs and in comprehensive school reform efforts.
- Reading Recovery must embrace the anecdotal evidence of its impact on systems change and find ways to articulate its value in relation to effective change.

While these suggestions do not directly address the issue of new or more funds for Reading Recovery, the suggestions are strategies that may make it possible for Reading Recovery to be better understood by school leaders as an innovation and, hence, lead to more funding. From a more traditional perspective, Reading Recovery can gather together all the information available about current sources of funding for the program and share that information and analysis throughout the Reading Recovery constituency. Reading Recovery also can be deliberate in approaching states and federal agencies for ideas and information that may support the ongoing funding of Reading Recovery.

Recommendations for Further Study

This study generates a number of interesting possibilities for further study. First, the development of a measure of implementation at the site level as an alternative to the school level could strengthen the researcher's ability to draw conclusions about the relationship between the teacher leaders' reported behaviors and extent of the implementation.

Also, observing teacher leaders' behaviors in the field, at the site, on a first-hand basis rather than depending on self-reports could provide further opportunities for analysis of the relationship between the behaviors and the extent of the implementation. Field studies would also help control for pro-innovation bias from self-reports and recall problems associated with self-reports.

Analysis of the difference between implementing Reading Recovery in a single district site in comparison to implementing the program in a consortium of multiple districts could provide further insight into the complexity of the responsibilities of the teacher leader. Such analysis also could provide valuable information regarding collaboration and coalition building to support an educational innovation as well as about the scale of the implementation required to sustain the teacher leader role.

Embedding Reading Recovery into the educational system in many instances has been dependent upon its development of relationships with other programs. A study of how these relationships are formed and what other programs are involved could provide insight into ways to insure the ongoing support for Reading Recovery implementation and institutionalization.

The role of leaders as decision-makers and the role of opinion leaders in influencing decisions call for additional study from the perspective of educating leaders and building ownership for Reading Recovery through a succession of leaders in a particular school, district, or site. Given the strength of the teacher leaders' responses concerning the importance of these roles, and given the literature on the importance of these roles, such a study could provide valuable information about sustaining the implementation in the face of changes in leadership. Particular attention could be paid to the role of the principal and how teacher leaders could assist Reading Recovery teachers in working with principals. Another variation for research with this particular important group could be to research these leaders' perceptions of the teacher leader's role.

Obtaining responses from additional teacher leaders could help address the issue of response by 35% of the population in this study. Research through the use of focus groups or additional surveys from the non-responding teacher leaders to gather their assessment of the data collected in this study could provide additional insight into the change process and the teacher leader role in that process.

Further investigation of the data collected in this study on several different dimensions could be interesting. Examples of these dimensions include the length of time a teacher leader has been in his or her role and the length of time the school or/and site has been involved in Reading Recovery.

Separate investigations of subgroups of the teacher leader population might also be informative with regard to the change process. Given that the respondents in this research were largely white women

136

(including 18 of 19 interviewees), further research targeted to underrepresented groups (particularly African Americans and Hispanics) and to male teacher leaders could provide additional insight into the role of teacher leader and to particular circumstances experienced by these teacher leaders.

Finally, further assessment of the various responsibilities within the complex role of the teacher leader is desirable. Learning how teacher leaders actually spend their time could provide valuable information about the teacher leader's role in the change process. In addition, research regarding the responsibilities that teacher leaders perform outside their Reading Recovery role is warranted given the responses to the open-ended questions in the questionnaire as well as the data collected during the interview process.

137

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Appendix

A Survey on the Role of the Teacher Leader in the Scaling Up of an Educational Innovation

*Read the instructions for response for each individual question carefully prior to indicating your response. When selecting "Other (Specify)," be sure to check the ranking box. (**Note:** Throughout this survey, "implementation" refers to the period of time that includes the first year and subsequent years of teacher training at the site.)*

1. How do you develop ongoing support for Reading Recovery implementation at your site? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Provide data on student performance											
Assist with problem-solving around difficult to teach children											
Assist with problem solving around scheduling of lessons											
Assist in building school and district Reading Recovery teams											
Communicate promptly											
Stay available for consultation to teachers											
Make in-service presentations											
Serve as a clearinghouse for early literacy information											
Other (Specify)											
Other (Specify)											
Other (Specify)											

2. Who are the decision-makers with whom you work in the implementation process and to what extent are they involved? (Check ranking for each decision-maker category listed below from 0 to 5 where 0 = *not involved*, and 5 = *very involved*.)

	0	1	2	3	4	5
School board members						
Superintendent						
Assistant Superintendent						
Federal Programs Director						
Principals						
Classroom Teachers						
School Teams						
District Teams						
Other (Specify)						
Other (Specify)						
Other (Specify)						

3. Check one response only.

	Never = 0 0	1			*Frequently (Daily) = 5* 2	3	4	5
Describe the number of contacts with decision-makers at your site that you have during the ongoing implementation process.								

4. How do you establish your credibility/trustworthiness in relation to others in the implementation of Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Listen to needs as expressed by teachers and administrators											
Engage in problem solving around a variety of issues											
Provide accurate information about Reading Recovery											
Share information about my personal experience in Reading Recovery											
Link decision-makers with others who have implemented Reading Recovery											
Emphasize my common interests with those of the decision-makers											
Other (Specify)											
Other (Specify)											
Other (Specify)											

5. How do you work with opinion leaders (people who influence decisions even though they may not be the decision-makers) toward full implementation of Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Contact opinion leaders with information											
Answer questions about Reading Recovery from opinion leaders											
Enlist opinion leaders in endorsing the ongoing implementation of Reading Recovery											
Tell success stories of children's experiences in Reading Recovery											
Describe the relationship between Reading Recovery and the classroom program											
Other (Specify)											
Other (Specify)											
Other (Specify)											

6. Prior to a formal evaluation process, how do you demonstrate the effectiveness of Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Provide opportunities for school personnel, opinion leaders, and decision-makers to observe a Reading Recovery lesson and a behind the glass session											
Provide written materials that document the success of Reading Recovery											
Provide statements from teachers, parents, and others in districts that have adopted Reading Recovery											
Provide data from the site and compare it with state and/or national data											
Other (Specify)											
Other (Specify)											
Other (Specify)											

7. How do you assist your site (across the district(s) or at the school level) in evaluating the effectiveness of Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Provide annual site report with information about the progress of the program											
Provide analysis of cost-benefit in relation to retention and referral of Reading Recovery children in comparison to non-Reading Recovery children											
Provide information about how to determine "full implementation" in each school											
Provide rationales for Standards and Guidelines in Reading Recovery											
Provide forums for discussion of Reading Recovery results in schools and at the district level											
Other (Specify)											
Other (Specify)											
Other (Specify)											

8. After demonstrating effectiveness, how do you maintain the quality of the implementation in relation to the Standards and Guidelines for Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Articulate the Standards and Guidelines and rationales so that they were understood by all											
Provide examples of how decisions at the school or district level created problems with the quality implementation of Reading Recovery											
Apply to University Training Center for one-time waiver of a Standard											
Problem-solve a variety of situations at the school and district levels in order to maintain compliance with the Standards and Guidelines											
Monitor quality of implementation and children's programs at school and site level											
Other (Specify)											
Other (Specify)											
Other (Specify)											

9. What are the greatest barriers or problems in achieving and maintaining full implementation? (Check ranking from 0 to 10 where 0 = *not a problem*, and 10 = *a substantial problem*.)

	0	1	2	3	4	5	6	7	8	9	10
Funding											
Competing programs											
Low priority											
Emphasis on proficiency tests											
Scheduling regular lessons											
Documenting success											
Responding to negative critiques of Reading Recovery											
Perceived high cost of program											
Limited program understanding in the district											
Not a comprehensive program											
Lack of attention from decision makers											
Low interest among classroom teachers											
Lack of administrative support											
Political problems in the school district											
Student mobility											
Large number of students who need additional support											
Perceived incompatibility of Reading Recovery with the predominant approach to literacy instruction											
Other (Specify)											
Other (Specify)											
Other (Specify)											

10. What strategies do you use to overcome barriers or problems with implementation? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Apply for funds from non-school sources											
Provide information to demonstrate Reading Recovery effectiveness in relation to other early intervention programs											
Explain why a safety net program needs high priority											
Document performance of former Reading Recovery students on proficiency tests											
Work with classroom teachers and principals to increase the frequency of daily lessons											
Develop and distribute school reports documenting success of Reading Recovery students in the classroom											
Provide information about Reading Recovery in response to critiques											
Work with teachers and principals to develop cost-benefit scenarios for Reading Recovery											
Conduct awareness sessions in the district											
Explain how Reading Recovery is a part of a comprehensive program											
Provide regular reports to decision-makers											
Provide in-service training for classroom teachers											
Convene meetings of classroom and Reading Recovery teachers											
Provide information to administrators											
Avoid involvement in political processes											
Support classroom program development											
Consult with university training center for assistance											
Other (Specify)											
Other (Specify)											
Other (Specify)											

11. Check one response only.	*Not Important = 0*		*Very Important = 5*			
	0	1	2	3	4	5
How important is it to you to continue being a Reading Recovery teacher leader?						

12. Check one response only.	*Not Important = 0*		*Very Important = 5*			
	0	1	2	3	4	5
How important is it to you to continue being in your current district for employment?						

13. What does your university training center do to support implementation at your site? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Provides relevant and timely professional development sessions											
Provides updated information about implementation issues											
Assists with problem solving around issues of compliance with Reading Recovery Standards and Guidelines											
Assists with problems related to teaching the most difficult to accelerate children											
Meets with school officials as needed to discuss implementation issues											
Supports and promotes communication and networking among Reading Recovery teachers and teacher leaders associated with it											
Organizes Reading Recovery conference											
Other (Specify)											
Other (Specify)											
Other (Specify)											

14. What additional help would you like to have in implementing Reading Recovery at your site? Who could provide that help?

15. Describe two things you did that you consider very successful in making Reading Recovery work well at your site. These need not be "traditional" things you learned in your training. It could be "lucky accidents," people you know, advantages in a particular situation.

16. What are you most proud of in your work at your Reading Recovery site? What is your proudest accomplishment?

17. What has been most rewarding to you in your work in Reading Recovery? In other words, what is the most compelling reason for continuing your work in Reading Recovery? Write as much as you can.

Complete questions 18 through 22 only if you have participated in the process of adopting Reading Recovery (i.e., when the commitment was made at the site to train the first teacher leader).

18. How were you involved in the adoption of Reading Recovery at your site? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Identified and presented information on Reading Recovery as a solution to our early literacy problem											
Created awareness of needs through presentations to others of the information I identified											
Presented information about alternatives and why they would not be successful											
Presented information about how everyone who wanted to be involved could be involved											
Convinced other school personnel that Reading Recovery could help											
Other (Specify)											
Other (Specify)											
Other (Specify)											

19. How did you establish rapport with the schools in order to promote the adoption of Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Worked first with colleagues who knew me to be credible, competent and trustworthy											
Gathered and shared information about Reading Recovery as a possible solution											
Held awareness sessions for interested individuals in the school system and community											
Met with additional colleagues and system decision-makers (principals, administrators, board members) about Reading Recovery											
Problem-solved with decision-makers about potential problems they saw in implementing Reading Recovery											
Other (Specify)											
Other (Specify)											
Other (Specify)											

20. What action of yours was the most important factor in influencing schools to adopt Reading Recovery? (Check ranking from 0 to 10 where 0 = *never*, and 10 = *very often*.)

	0	1	2	3	4	5	6	7	8	9	10
Met with colleagues to persuade them to support adoption											
Met with opinion leaders (people who influence decisions even though they may not be the decision-makers) to persuade them to support adoption											
Met with decision-makers (school board members, superintendent, principals, or others who make policy decisions for the district) to encourage them to adopt											
Provided additional information upon request											
Wrote letters of support											
Other (Specify)											
Other (Specify)											
Other (Specify)											

147

21. Who are the decision-makers in the adoption process and to what extent were they involved? (Check ranking for each decision-maker category listed below from 0 to 10 where 0 = *not involved*, and 5 = *very involved*.)

	0	1	2	3	4	5
School board members						
Superintendent						
Assistant Superintendent						
Federal Programs Director						
Principals						
Classroom Teachers						
School Teams						
District Teams						
Other (Specify)						
Other (Specify)						
Other (Specify)						

22. Check one response only.

Never = 0 0 1 *Frequently (Daily) = 5* 2 3 4 5

Describe the number of contacts with decision-makers you had during the adoption stage.

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○ Administrator ○ Parent ○ Volunteer

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Author(s): Prisca Martens and Susan Adamson	
Corporate Source: Literacy Teaching and Learning: An International Journal of Early Reading and Writing	Publication Date: 2001 Volume 5 Number 2

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Author(s): Dr. Jean F Bussell	
Corporate Source: Literacy Teaching and Learning: An International Journal of Early Reading and Writing	Publication Date: 2001 Volume 5 number 2

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